

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2004-007356

(43)Date of publication of application : 08.01.2004

(51)Int.Cl.

H04N 5/765 G06F 12/00 G06F 13/00

H04N 5/76 H04N 7/173

(21)Application number : 2002-289960

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(22)Date of filing : 02.10.2002

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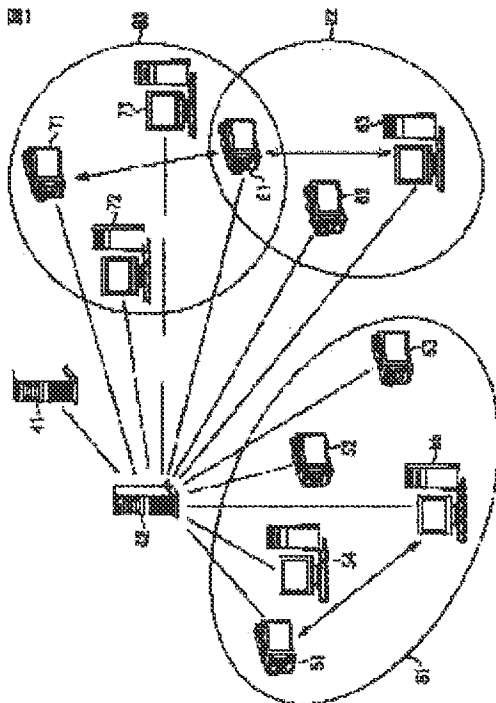
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(30)Priority

Priority number : 2002120658 Priority date : 23.04.2002 Priority country : JP

(54) INFORMATION PROCESSING SYSTEM, INFORMATION PROCESSOR AND ITS METHOD, PROGRAM STORAGE MEDIUM, AND PROGRAM

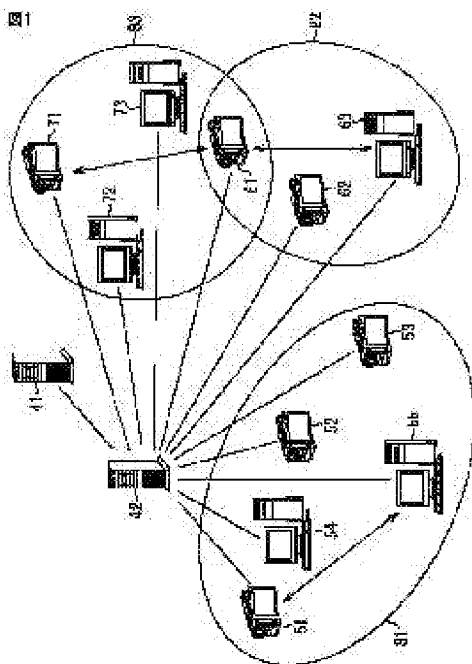


(57)Abstract:

PROBLEM TO BE SOLVED: To allow also equipment having a recording medium of small capacity to easily deal with files of large capacity.

SOLUTION: A digital video camera 51 is transmits the picture data of files recorded in a built-in recording medium to a personal computer 54 belonging to the same group 81 through a network. When the transmission is interrupted on the way, the camera 51 divides the files into two sections on a resume start position expressing the interrupted position and deletes files whose data have been already transferred. The invention can be applied to a digital video camera having a network function.

**(54) INFORMATION PROCESSING SYSTEM, INFORMATION PROCESSOR AND ITS METHOD, PROGRAM STORAGE MEDIUM, AND PROGRAM**



(57)Abstract:

**PROBLEM TO BE SOLVED:** To allow also equipment having a recording medium of small capacity to easily deal with files of large capacity.

**SOLUTION:** A digital video camera 51 is transmits the picture data of files recorded in a built-in recording medium to a personal computer 54 belonging to the same group 81 through a network. When the transmission is interrupted on the way, the camera 51 divides the files into two sections on a resume start position expressing the interrupted position and deletes files whose data have been already transferred.

The invention can be applied to a digital video camera having a network function.

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**CLAIMS**

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[Claim(s)]

[Claim 1]

In an information processing system which consists of the 1st information processor that transmits a file, and the 2nd information processor that receives said file which said 1st information processor transmitted,

Said 1st information processor,

The 1st holding mechanism holding said file,

The 1st transmitting means that transmits data which constitutes said file currently held at said 1st holding mechanism to said 2nd information processor,

The 1st reception means that receives position information showing a position when transmission of data which constitutes said file by said 1st transmitting means is interrupted on the way from said 2nd information processor,

A division means to divide said file into the 1st file that consists of the 1st data as already transmitted data, and the 2nd file that consists of the 2nd data as data which has not been transmitted yet based on said position information received by said 1st reception means,

A deleting means which deletes said 1st file divided by said division means, and the 2nd transmitting means that transmits said 2nd data that constitutes said 2nd file divided by said division means to said 2nd information processor

A preparation,

Said 2nd information processor,

The 2nd reception means that receives data which constitutes said file transmitted from said 1st information processor,

The 2nd holding mechanism that holds said 1st data received by then when reception of data which constitutes said file by said 2nd reception means is interrupted on the way,

The 3rd transmitting means that transmits said position information which detects the position and expresses the position when reception of data which constitutes said file by said 2nd reception means is interrupted on the way to said 1st information processor,

The 3rd reception means that said 1st information processor has transmitted based on said position information transmitted by said 3rd transmitting means and that receives said 2nd data, A synthesizing means which compounds said 2nd data received by said 3rd reception means with said 1st data, and makes it hold to said 2nd holding mechanism as one file

An information processing system characterized by preparation \*\*\*\*\*.

[Claim 2]

In an information processing method of an information processing system which consists of the 1st information processor that transmits a file, and the 2nd information processor that receives said file which said 1st information processor transmitted,

An information processing method of said 1st information processor,

The 1st maintenance step holding said file,

The 1st transmission step that transmits data which constitutes said file currently held by processing of said 1st maintenance step to said 2nd information processor,

The 1st receiving step that receives position information showing a position when transmission of data which constitutes said file by processing of said 1st transmission step is interrupted on the way from said 2nd information processor,

A division step which divides said file into the 1st file that consists of the 1st data as already transmitted data, and the 2nd file that consists of the 2nd data as data which has not been transmitted yet based on said position information received by processing of said 1st receiving step,

A deletion step which deletes said 1st file divided by processing of said division step,

The 2nd transmission step that transmits said 2nd data that constitutes said 2nd file divided by processing of said division step to said 2nd information processor

An implication,

An information processing method of said 2nd information processor,

The 2nd receiving step that receives data which constitutes said file transmitted from said 1st information processor,

The 2nd maintenance step that holds said 1st data received by then when reception of data which constitutes said file by processing of said 2nd receiving step is interrupted on the way,

The 3rd transmission step that transmits said position information which detects the position and expresses the position when reception of data which constitutes said file by processing of said 2nd receiving step is interrupted on the way to said 1st

information processor,

The 3rd receiving step that said 1st information processor has transmitted based on said position information transmitted by processing of said 3rd transmission step and that receives said 2nd data,

A synthetic step which compounds said 2nd data received by processing of said 3rd receiving step with said 1st data, and makes it hold as one file

\*\*\*\*\* -- an information processing method characterized by things.

[Claim 3]

Holding mechanism holding a file,

The 1st transmitting means that transmits data which constitutes said file currently held by said holding mechanism to other information processors,

transmission of data which constitutes said file by said 1st transmitting means -- on the way -- position information which comes out and expresses a position at the time of being interrupted -- said -- others -- the 1st reception means received from an information processor,

A division means to divide into the 1st file that contains data to which said file was already transmitted based on said position information received by said 1st reception means, and the 2nd file containing data which has not been transmitted yet,

A deleting means which deletes said 1st file divided by said division means,

The 2nd transmitting means that transmits data which constitutes said 2nd file divided by said division means to an information processor besides the above

An information processor characterized by preparation \*\*\*\*\*.

[Claim 4]

A partner who transmits data which constitutes said file has further a judging means which judges whether it belongs to the same group,

Said 1st transmitting means transmits data which constitutes said file, when judged with a partner who transmits belonging to the same group by said judging means.

The information processor according to claim 3 characterized by things.

[Claim 5]

Said file has the attribution information showing the attribute of whether to be recorded by private life.

The information processor according to claim 3 characterized by things.

[Claim 6]

It has further a judging means which judges whether said file is recorded by private life,

Said 1st transmitting means permits transmission, when judged with said file being recorded by private life by said judging means.

The information processor according to claim 4 characterized by things.

[Claim 7]

A request means which requires a notice of a power supply state from an information processor besides the above,

The 2nd reception means that receives a notice of said power supply state from an information processor besides the above,

A commanding means which orders it starting when it is in a state which said power supply state of an information processor besides the above has not started

The information processor according to claim 3 preparing for a pan.

[Claim 8]

A maintenance step holding a file,

The 1st transmission step that transmits data which constitutes said file currently held by processing of said 1st maintenance step to other information processors, transmission of data which constitutes said file by processing of said 1st transmission step -- on the way -- position information which comes out and expresses a position at the time of being interrupted -- said -- others -- a receiving step received from an information processor,

A division step divided into the 1st file that contains data to which said file was already transmitted based on said position information received by processing of said receiving step, and the 2nd file containing data which has not been transmitted yet,

A deletion step which deletes said 1st file divided by processing of said division

step,

The 2nd transmission step that transmits data which constitutes said 2nd file divided by processing of said division step to an information processor besides the above

\*\*\*\*\* -- an information processing method characterized by things.

[Claim 9]

The 1st transmission step that transmits data which constitutes a file to other information processors,

transmission of data which constitutes said file by processing of said 1st transmission step -- on the way -- position information which comes out and expresses a position at the time of being interrupted -- said -- others -- a receiving step received from an information processor,

A division step divided into the 1st file that contains data to which said file was already transmitted based on said position information received by processing of said receiving step, and the 2nd file containing data which has not been transmitted yet,

A deletion step which deletes said 1st file divided by processing of said division step,

The 2nd transmission step that transmits data which constitutes said 2nd file divided by processing of said division step to an information processor besides the above

\*\*\*\*\* -- a program storing medium with which a program which a computer characterized by things can read is stored.

[Claim 10]

The 1st transmission step that transmits data which constitutes a file to other information processors,

transmission of data which constitutes said file by processing of said 1st transmission step -- on the way -- position information which comes out and expresses a position at the time of being interrupted -- said -- others -- a receiving step received from an information processor,

A division step divided into the 1st file that contains data to which said file was already transmitted based on said position information received by processing of said receiving step, and the 2nd file containing data which has not been transmitted yet,

A deletion step which deletes said 1st file divided by processing of said division step,

The 2nd transmission step that transmits data which constitutes said 2nd file divided by processing of said division step to an information processor besides the above

A program performing a computer.

[Claim 11]

The 1st reception means that receives data which constitutes a file transmitted from other information processors,

Holding mechanism which holds data received by then as the 1st data when reception of data which constitutes said file by said 1st reception means is interrupted on the way,

reception of data which constitutes said file by said 1st reception means -- on the way -- position information which comes out, detects the position and expresses the position when interrupted -- said -- others -- the 1st transmitting means that transmits to an information processor,

The 2nd reception means that receives the 2nd data as data which follows said 1st data among data which an information processor besides the above has transmitted, and which constitutes said file based on said position information transmitted by said 1st transmitting means,

A synthesizing means which compounds said 2nd data received by said 2nd reception means with said 1st data, and makes it hold to said holding mechanism as one file

An information processor characterized by preparation \*\*\*\*\*.

[Claim 12]

It has further a judging means a partner who transmits data which constitutes said



file received by said 1st reception means judges whether it belongs to the same group to be,

Transmission is permitted when judged with said 1st reception means belonging to the group with same partner who transmits data which constitutes said file received by said 1st reception means by said judging means.

The information processor according to claim 11 characterized by things.

[Claim 13]

Said file has the attribution information showing the attribute of whether to be recorded by private life.

The information processor according to claim 11 characterized by things.

[Claim 14]

The 3rd reception means that receives a demand of a notice of a power supply state from an information processor besides the above,

A detection means to detect said power supply state,

The 1st reporting means that notifies said power supply state detected by said detection means to an information processor besides the above,

The 4th reception means that receives motive instructions from an information processor besides the above,

A starting means started when it judges whether you are a partner who can order it starting to which an information processor besides the above was set beforehand when motive instructions are received by said 4th reception means and judged with his being a partner who can order it said starting

The information processor according to claim 11 preparing for a pan.

[Claim 15]

The 2nd reporting means that notifies an information processor besides the above that it started,

It has further the 5th reception means that receives a response to a notice by said 2nd reporting means from an information processor besides the above,

Said starting means maintains the state where started when motive instructions were received by said 4th reception means, and it started when said 5th reception

means received said response, and when not receiving, it stops starting.

The information processor according to claim 14 characterized by things.

[Claim 16]

The 2nd transmitting means that transmits a signal which checks whether motive instructions have been transmitted to a partner who can order it said starting when motive instructions are received by said 4th reception means,

It has further said 5th reception means that receives a response of a signal by said 2nd transmitting means,

Said starting means is started when response of having transmitted instructions of said starting by said 5th reception means is received.

The information processor according to claim 14 characterized by things.

[Claim 17]

When it turns off a power supply, it has further a determination means to determine a password, and the 5th reception means that receives said password from an information processor besides the above,

Said starting means is started when a password received by said 5th reception means and said password determined by said determination means are in agreement.

The information processor according to claim 14 characterized by things.

[Claim 18]

The 1st receiving step that receives data which constitutes a file transmitted from other information processors,

A maintenance step which holds data received by then as the 1st data when reception of data which constitutes said file by processing of said 1st receiving step is interrupted on the way,

reception of data which constitutes said file by processing of said 1st receiving step -- on the way -- position information which comes out, detects the position and expresses the position when interrupted -- said -- others -- a transmission step which transmits to an information processor,

Based on said position information transmitted by processing of said transmission

step, The 2nd receiving step that receives the 2nd data as data which follows said 1st data among data which an information processor besides the above has transmitted, and which constitutes said file, A synthetic step which compounds said 2nd data received by processing of said 2nd receiving step with said 1st data, and makes it hold as one file

\*\*\*\*\* -- an information processing method characterized by things.

[Claim 19]

The 1st receiving step that receives data which constitutes a file transmitted from other information processors,

reception of data which constitutes said file by processing of said 1st receiving step -- on the way -- position information which comes out, detects the position and expresses the position when interrupted -- said -- others -- a transmission step which transmits to an information processor,

The 2nd receiving step that receives by then among data which an information processor besides the above has transmitted, and which constitutes said file, and receives the 2nd data as data following the 1st data currently held based on said position information transmitted by processing of said transmission step,

A synthetic step which compounds said 2nd data received by processing of said 2nd receiving step with said 1st data, and considers it as one file

\*\*\*\*\* -- a program storing medium with which a program which a computer characterized by things can read is stored.

[Claim 20]

The 1st receiving step that receives data which constitutes a file transmitted from other information processors,

reception of data which constitutes said file by processing of said 1st receiving step -- on the way -- position information which comes out, detects the position and expresses the position when interrupted -- said -- others -- a transmission step which transmits to an information processor,

The 2nd receiving step that receives by then among data which an information processor besides the above has transmitted, and which constitutes said file, and

receives the 2nd data as data following the 1st data currently held based on said position information transmitted by processing of said transmission step,

A synthetic step which compounds said 2nd data received by processing of said 2nd receiving step with said 1st data, and considers it as one file

A program performing a computer.

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## DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Field of the Invention]

In [ about an information processing system, an information processor and a method a program storing medium, and a program ] mobile computing devices with especially few storage capacities in this invention, It is related with the information processing system, the information processor and the method, program storing medium, and program which enabled it to deal with a mass file easily.

[0002]

[Description of the Prior Art]

The file exchange system for which a file is exchanged via a network is indicated by the patent documents 1, for example. When re transfer is carried out after transmission of a file is interrupted for this file exchange system, only untransmitted file data is transmitted.

[0003]

[Patent documents 1]

JP,2001-249857,A (the 4th page, drawing 2)

[0004]

[Problem(s) to be Solved by the Invention]

[0005]

However, in the file exchange system of the patent documents 1, the file

transmission side needs to leave a file to transmit to the archive medium at hand until a file receiver finishes receiving the whole file.

[0006]

Therefore, in the file exchange system of the patent documents 1. For example, since the remaining capacity of the archive medium has decreased as a result of recording the picturized image data on an archive medium in a digital camcorder, Use a network function, transmit the image data recorded on the archive medium to the personal computer of the user's house, and an archive medium is emptied, Since a new picture could not be picturized when transfer operation had been interrupted on the way for a certain reason when it was going to enable it to record new image data, the shutter chance might be missed.

[0007]

Since what has large storage capacity cannot be used as an archive medium in order that especially a portable digital camcorder may secure the portability, the existence value of a network function is made, as for generating of such a situation, spoiled greatly.

[0008]

This invention is made in view of such a situation, and it aims at enabling it to deal with a mass file easily also in apparatus with small storage capacity of an archive medium.

[0009]

[Means for Solving the Problem]

An information processing system of this invention the 1st information processor, The 1st holding mechanism holding a file, and the 1st transmitting means that transmits data which constitutes a file currently held at the 1st holding mechanism to the 2nd information processor, The 1st reception means that receives position information showing a position when transmission of data which constitutes a file by the 1st transmitting means is interrupted on the way from the 2nd information processor, The 1st file that consists of the 1st data as data to which a file was already transmitted based on position information received by the 1st reception

means, A division means to divide into the 2nd file that consists of the 2nd data as data which has not been transmitted yet, It has a deleting means which deletes the 1st file divided by a division means, and the 2nd transmitting means that transmits the 2nd data that constitutes the 2nd file divided by a division means to the 2nd information processor, The 2nd holding mechanism that holds the 1st data received by then when reception of data which constitutes a file by the 2nd reception means that receives data which constitutes a file transmitted from the 1st information processor, and the 2nd reception means interrupts the 2nd information processor on the way, The 3rd transmitting means that transmits position information which detects the position and expresses the position when reception of data which constitutes a file by the 2nd reception means is interrupted on the way to the 1st information processor, The 3rd reception means that the 1st information processor has transmitted based on position information transmitted by the 3rd transmitting means and that receives the 2nd data, It has a synthesizing means which compounds the 2nd data received by the 3rd reception means with the 1st data, and makes it hold to the 2nd holding mechanism as one file.

[0010]

An information processing method of an information processing system of this invention, The 1st maintenance step in which an information processing method of the 1st information processor holds a file, The 1st transmission step that transmits data which constitutes a file currently held by processing of the 1st maintenance step to the 2nd information processor, The 1st receiving step that receives position information showing a position when transmission of data which constitutes a file by processing of the 1st transmission step is interrupted on the way from the 2nd information processor, The 1st file that consists of the 1st data as data to which a file was already transmitted based on position information received by processing of the 1st receiving step, A division step divided into the 2nd file that consists of the 2nd data as data which has not been transmitted yet, A deletion step which deletes the 1st file divided by processing of a division step, The 2nd transmission step that transmits the 2nd data that constitutes the 2nd file divided by processing of a

division step to the 2nd information processor is included, The 2nd receiving step that receives data which constitutes a file to which an information processing method of the 2nd information processor is transmitted from the 1st information processor, The 2nd maintenance step that holds the 1st data received by then when reception of data which constitutes a file by processing of the 2nd receiving step is interrupted on the way, The 3rd transmission step that transmits position information which detects the position and expresses the position when reception of data which constitutes a file by processing of the 2nd receiving step is interrupted on the way to the 1st information processor, The 3rd receiving step that the 1st information processor has transmitted based on position information transmitted by processing of the 3rd transmission step and that receives the 2nd data, A synthetic step which compounds the 2nd data received by processing of the 3rd receiving step with the 1st data, and makes it hold as one file is included.

[0011]

This invention is characterized by the 1st information processor comprising the following.

Holding mechanism holding a file.

The 1st transmitting means that transmits data which constitutes a file currently held by holding mechanism to other information processors.

The 1st reception means that receives position information showing a position when transmission of data which constitutes a file by the 1st transmitting means is interrupted on the way from other information processors.

The 1st file that contains data to which a file was already transmitted based on position information received by the 1st reception means, A division means to divide into the 2nd file containing data which has not been transmitted yet, a deleting means which deletes the 1st file divided by a division means, and the 2nd transmitting means that transmits data which constitutes the 2nd file divided by a division means to other information processors.

[0012]

It has further a judging means a partner who transmits data which constitutes a file judges whether it belongs to the same group to be, and the 1st transmitting means can transmit data which constitutes a file, when judged with a partner who transmits belonging to the same group by a judging means.

[0013]

The file can have the attribution information showing the attribute of whether to be recorded by private life.

[0014]

It has further a judging means which judges whether a file is recorded by private life, and the 1st transmitting means can permit transmission, when judged with a file being recorded by judging means by private life.

[0015]

It can have further a request means which requires a notice of a power supply state from other information processors, the 2nd reception means that receives a notice of a power supply state from other information processors, and a commanding means which orders it starting when it is in a state which a power supply state of other information processors has not started.

[0016]

This invention is characterized by the 1st information processing method comprising the following.

A maintenance step holding a file.

The 1st transmission step that transmits data which constitutes a file currently held by processing of the 1st maintenance step to other information processors.

A receiving step which receives position information showing a position when transmission of data which constitutes a file by processing of the 1st transmission step is interrupted on the way from other information processors.

The 1st file that contains data to which a file was already transmitted based on position information received by processing of a receiving step, A division step divided into the 2nd file containing data which has not been transmitted yet, A deletion step which deletes the 1st file divided by processing of a division step, and



the 2nd transmission step that transmits data which constitutes the 2nd file divided by processing of a division step to other information processors.

[0017]

This invention is characterized by a program of the 1st program storing medium comprising the following.

The 1st transmission step that transmits data which constitutes a file to other information processors.

A receiving step which receives position information showing a position when transmission of data which constitutes a file by processing of the 1st transmission step is interrupted on the way from other information processors.

The 1st file that contains data to which a file was already transmitted based on position information received by processing of a receiving step.

A division step divided into the 2nd file containing data which has not been transmitted yet, A deletion step which deletes the 1st file divided by processing of a division step, and the 2nd transmission step that transmits data which constitutes the 2nd file divided by processing of a division step to other information processors.

[0018]

The 1st transmission step that transmits data in which the 1st program of this invention constitutes a file to other information processors, A receiving step which receives position information showing a position when transmission of data which constitutes a file by processing of the 1st transmission step is interrupted on the way from other information processors, The 1st file that contains data to which a file was already transmitted based on position information received by processing of a receiving step, A division step divided into the 2nd file containing data which has not been transmitted yet, A computer is made to perform a deletion step which deletes the 1st file divided by processing of a division step, and the 2nd transmission step that transmits data which constitutes the 2nd file divided by processing of a division step to other information processors.

[0019]

This invention is characterized by the 2nd information processor comprising the following.

The 1st reception means that receives data which constitutes a file transmitted from other information processors.

Holding mechanism which holds data received by then as the 1st data when reception of data which constitutes a file by the 1st reception means is interrupted on the way.

The 1st transmitting means that transmits position information which detects the position and expresses the position when reception of data which constitutes a file by the 1st reception means is interrupted on the way to other information processors.

The 2nd reception means that receives the 2nd data as data which follows the 1st data among data which other information processors have transmitted, and which constitutes a file based on position information transmitted by the 1st transmitting means, A synthesizing means which compounds the 2nd data received by the 2nd reception means with the 1st data, and makes it hold to holding mechanism as one file.

[0020]

Have further a judging means a partner who transmits data which constitutes a file received by the 1st reception means judges whether it belongs to the same group to be, and the 1st reception means, Transmission can be permitted when it judges that a partner who transmits data which constitutes a file received by the 1st reception means by a judging means belongs to the same group.

[0021]

The file can have the attribution information showing the attribute of whether to be recorded by private life.

[0022]

The 3rd reception means that receives a demand of a notice of a power supply state

from other information processors, A detection means to detect a power supply state, and the 1st reporting means that notifies a power supply state detected by a detection means to other information processors, When motive instructions are received by the 4th reception means that receives motive instructions from other information processors, and the 4th reception means, When it judges whether you are a partner who can order it starting to which other information processors were set beforehand and judged with his being a partner who can order it motive, it can have a starting means to start further.

[0023]

A response to a notice by the 2nd reporting means that notifies other information processors that it started, and the 2nd reporting means, It has further the 5th reception means received from other information processors, and a starting means maintains the state where started when motive instructions were received by the 4th reception means, and it started when the 5th reception means received a response, and when not receiving, it can stop starting.

[0024]

The 2nd transmitting means that transmits a signal which checks whether motive instructions have been transmitted to a partner who can order it motive when motive instructions are received by the 4th reception means, It has further the 5th reception means that receives a response of a signal by the 2nd transmitting means, and a starting means can be started when response of having transmitted motive instructions by the 5th reception means is received.

[0025]

When it turns off a power supply, have further a determination means to determine a password, and the 5th reception means that receives a password from other information processors, and a starting means, It can start, when a password received by the 5th reception means and a password determined by a determination means are in agreement.

[0026]

This invention is characterized by the 2nd information processing method

comprising the following.

The 1st receiving step that receives data which constitutes a file transmitted from other information processors.

A maintenance step which holds data received by then as the 1st data when reception of data which constitutes a file by processing of the 1st receiving step is interrupted on the way.

A transmission step which transmits position information which detects the position and expresses the position when reception of data which constitutes a file by processing of the 1st receiving step is interrupted on the way to other information processors.

The 2nd receiving step that receives the 2nd data as data which follows the 1st data among data which other information processors have transmitted, and which constitutes a file based on position information transmitted by processing of a transmission step, A synthetic step which compounds the 2nd data received by processing of the 2nd receiving step with the 1st data, and makes it hold as one file.

[0027]

This invention is characterized by a program of the 2nd program storing medium comprising the following.

The 1st receiving step that receives data which constitutes a file transmitted from other information processors.

A transmission step which transmits position information which detects the position and expresses the position when reception of data which constitutes a file by processing of the 1st receiving step is interrupted on the way to other information processors.

The 2nd receiving step that receives by then among data which other information processors have transmitted, and which constitutes a file, and receives the 2nd data as data following the 1st data currently held based on position information transmitted by processing of a transmission step.

A synthetic step which compounds the 2nd data received by processing of the 2nd

receiving step with the 1st data, and considers it as one file.

[0028]

The 1st receiving step that receives data which constitutes a file to which the 2nd program of this invention is transmitted from other information processors, A transmission step which transmits position information which detects the position and expresses the position when reception of data which constitutes a file by processing of the 1st receiving step is interrupted on the way to other information processors, . Other information processors have transmitted based on position information transmitted by processing of a transmission step. The 2nd receiving step that receives the 2nd data as data which receives by then among data which constitutes a file, and follows the 1st data currently held, A computer is made to perform a synthetic step which compounds the 2nd data received by processing of the 2nd receiving step with the 1st data, and considers it as one file.

[0029]

In an information processing system and a method of this invention, position information showing a position when transmission of a file from the 1st information processor to the 2nd information processor is interrupted on the way is transmitted to the 1st information processor from the 2nd information processor. Based on received position information, the 1st information processor divides a file into the 1st file that consists of the 1st data as already transmitted data, and the 2nd file that consists of the 2nd data as data which has not been transmitted yet, and deletes the 1st file that divided. The 2nd data that constitutes the 2nd divided file is transmitted to the 2nd information processor. The 2nd information processor compounds the 2nd data with the 1st data, and considers it as one file.

[0030]

In the 1st information processor of this invention and a method, a program storing medium, and a program, When data which constitutes a file was transmitted to other information processors and transmission is interrupted on the way, The 1st file whose position information showing the position contains data in which it was

received and a file was already transmitted based on received position information from other information processors, Data which it is divided into the 2nd file containing data which has not been transmitted yet, and the 1st divided file is deleted, and constitutes the 2nd divided file is transmitted to other information processors.

[0031]

In the 2nd information processor of this invention and a method, a program storing medium, and a program, When data which constitutes a file transmitted from other information processors is received and reception is interrupted on the way, data received by then is held as the 1st data, a position for which reception was interrupted is detected, and position information showing the position is transmitted to other information processors. Based on transmitted position information, the 2nd data as data following the 1st data of data which constitutes the file that other information processors have transmitted is received, and the 2nd received data compounds with the 1st data, and is considered as one file.

[0032]

[Embodiment of the Invention]

Hereafter, an embodiment of the invention is described with reference to drawings. Drawing 1 shows the example of composition of the file exchange system by which this invention was applied.

[0033]

The digital camcorder 51 thru/or 53, 61, 62 and 71, and the personal computers 54, 55, 63, 72, and 73 are connected to the server 42 via the network (the Internet is included) which is not illustrated, respectively. The user's information managing server 41 is connected to the server 42 via the network (the Internet is included) which is not illustrated.

[0034]

SIP (Session Initiation Protocol) is used, for example as these digital camcorders, a personal computer, and a method of connecting a server. The details of this method are indicated by RFC(Request For Comment) 2543. In the case of this example, the

server 42 has a function as a proxy server and a redirection server. A proxy server provides a substitute server function, the place of other clients is taken and a message is published, and a redirection server receives an SIP message, rewrites the address in it to a new address, and transmits it to a client.

[0035]

The user's information managing server 41 which has a function as a registration server registers user's information into a database. As user's information, the information of the digital camcorder 51 thru/or 53, 61, 62 and 71 and ID of the personal computers 54, 55, 63, 72, and 73, a password, an IP address, the group that belongs, etc. is registered.

[0036]

In this system, the partner and file exchange of each personal computer and a digital camcorder which belong to at least one group and belong to the same group are made possible. In the example of drawing 1, the digital camcorders 51 thru/or 53 and the personal computers 54 and 55 belong to the group 81, and the digital camcorders 61 and 62 and the personal computer 63 belong to the group 82. The digital camcorders 61 and 71 and the personal computers 72 and 73 belong to the group 83. That is, the digital camcorder 61 belongs to both the group 82 and the group 83.

[0037]

Therefore, for example, since the digital camcorder 51 and the personal computer 54 belong to the same group 81, file exchange is possible for them, but. Since the digital camcorder 51 belongs to the group 81 and the digital camcorder 62 belongs to the group 82, the file exchange cannot do the digital camcorder 51 and the digital camcorder 62. Since the digital camcorder 61 belongs to both the group 82 and the group 83, it can perform both and file exchange of the digital camcorder 62 belonging to the group 82, and the personal computer 72 belonging to the group 83.

[0038]

Drawing 2 shows the example of composition of the personal computer 54. The power supply 90 supplies energy required for each part of the personal computer 54.

This personal computer 54 contains CPU(Central Processing Unit) 91. The input/output interface 95 is connected to CPU91 via the bus 94. ROM (Read Only Memory)92 and RAM (Random Access Memory)93 are connected to the bus 94.

[0039]

The outputting part 97 which comprises output devices which comprise input devices which a user operates, such as a keyboard, a mouse, a scanner, and a microphone, such as the operation input section 96, a display, a loudspeaker, a printer, and a plotter, is connected to the input/output interface 95. . Communicate data via the storage parts store 98 which becomes I/O interface 95 from the hard disk drive etc. which store a program and various data, and the network containing LAN (Local Area Network). USB (Universal Serial Bus), The communications departments 99, such as IEEE(Institute of Electrical andElectronic Engineers) 1394, Bluetooth, IEEE802.11a/b, and Ethernet (R), are connected.

[0040]

The drive 100 which write data to recording media, such as the magnetic disk 101, the optical disc 102, the magneto-optical disc 103, and the semiconductor memory 104, is connected to the input/output interface 95 if needed.

[0041]

The information processing program which performs operation as an information processor which applied this invention to this personal computer 54, the magnetic disk 101 (a floppy disk is included) and the optical disc 102 (CD-ROM (Compact Disc-Read Only Memory).) . DVD (Digital Versatile Disc) is included. The personal computer 54 is supplied in the state where it was stored in the magneto-optical disc 103 (MD (Mini Disc) is included) or the semiconductor memory 104, and it is read by the drive 100, and is installed in the hard disk drive built in the storage parts store 98. From the storage parts store 98, the information processing program installed in the storage parts store 98 is loaded to RAM93 by instructions of CPU91 corresponding to the command from a user inputted into the input part 96, and is executed by them.

[0042]



Drawing 3 shows the example of composition of the digital camcorder 51. The digital camcorder 51 contains CPU112 which controls each part corresponding to a user's instructions inputted from the operation input section 119. CPU112 is connected with the internal memory 111. CPU112 The image signal processing part 113, the camera function part 117, CCD (charge-coupled device), It is connected to the photoelectric conversion part 114 which consists of CMOS (complementary metal-oxide semiconductor) etc., and the communications department 120 which communicates data via the network represented by the Internet.

[0043]

The drive 122 which write data to recording media, such as the magnetic disk 131, the optical disc 132, the magneto-optical disc 133, and the semiconductor memory 134, is connected to CPU112 if needed.

[0044]

The media interface 116 which performs interface processing of read-out is connected with the writing of data to the archive medium 115 by which the image signal processing part 113 is constituted from a flash memory etc., and also the liquid crystal display 121 is connected. The light from the optical lens part 118 controlled by the camera function part 117 enters into the photoelectric conversion part 114.

[0045]

The information processing program which performs operation as an information processor which applied this invention to this digital camcorder 51, The digital camcorder 51 is supplied in the state where it was stored in the magnetic disk 131, the optical disc 132, the magneto-optical disc 133, or the semiconductor memory 134, and it is read by the drive 122, and is installed in the archive medium 115. From the archive medium 115, the information processing program installed in the archive medium 115 is loaded to the internal memory 111 by instructions of CPU112 corresponding to the command from a user inputted into the operation input section 119, and is executed by them.

[0046]

Although a graphic display is omitted, the personal computers 55, 63, 72, and 73 and the servers 41 and 42 as well as the personal computer 54 are constituted, and are constituted. [ as well as / the digital camcorders 52, 53, 61, 62, and 71 / the digital camcorder 51 ]

[0047]

Therefore, in the following explanation, the composition of drawing 2 is quoted also as composition of the personal computers 55, 63, 72, and 73 and the servers 41 and 42. Similarly, the composition of drawing 3 is quoted also as composition of the digital camcorders 52, 53, 61, 62, and 71.

[0048]

Drawing 4 shows the example of functional composition of the digital camcorder 51 and the personal computer 54 which constitutes the file exchange system which applied this invention.

[0049]

The digital camcorder 51 has the SIP client 151, the file manager 153, FTP client 155, FTP server 156, HTTP client 157, and HTTP server 158.

[0050]

The SIP client 151 has the user lists 152. The group to whom ID and the user of the other party (user) whom the user specified as a partner in whom file exchange is possible belong is registered into the user lists 152.

[0051]

The file manager 153 manages a file with FAT (File AllocationTable) and a file directory. The file manager 153 has the file list 154 again. The list of files which the user specified as an object of transmission to the 3rd person is registered into the file list 154.

[0052]

FTP client 155 or HTTP client 157 performs processing which receives a file based on FTP or HTTP. FTP server 156 or HTTP server 158 performs processing which transmits a file based on FTP or HTTP.

[0053]

It is chosen by the file size transmitted any shall be used between FTP client 155, FTP server 156 or HTTP client 157, and HTTP server 158. For example, when size is smaller than a reference value, and HTTP is bigger than a reference value, FTP is chosen, respectively.

[0054]

The personal computer 54 also has the SIP client 171 thru/or HTTP server 178 like the SIP client 151 of the above digital camcorder 51 thru/or HTTP server 158. The thing of these corresponding names has the function to correspond, and since it becomes a repetition, the explanation is omitted.

[0055]

Next, the digital camcorder 51 explains the processing which registers the group to whom a user ID and a user belong to the user lists 152 with reference to drawing 5.

[0056]

In Step S1, CPU112 of the digital camcorder 51, If the mail address of those who want to register from a user is received via the operation input section 119, the communications department is controlled, the mail address of \*\* will be used as a key and the signal which requests from the user's information managing server 41 ID of those who want to register, and search of the group to whom the person belongs will be transmitted.

[0057]

In Step S11, CPU91 of the user's information managing server 41, If the signal of search is received via the communications department 99, in Step S12, a mail address will be used as a key and ID and the group who belongs will be searched from the user's information database which the user's information managing server 41 holds. And in Step S13, CPU91 of the user's information managing server 41 controls the communications department 99, and transmits the searched user ID and the group who belongs to the digital camcorder 51.

[0058]

In Step S2, CPU112 of the digital camcorder 51 receives a user ID and the group who belongs from the user's information managing server 41 via the

communications department 120. In Step S3, CPU112 of the digital camcorder 51 registers the user ID which received, and the group who belongs into the user lists 152.

[0059]

Since the same person is also registered for every apparatus, a user ID and the group who belongs may become plurality.

[0060]

This user registration Section 4.2.6 of RFC2543, It can carry out in accordance with the method currently indicated by Section 2.1.1 of Internet Draft "SIP Call Flow Examples" of IETF (InternetEngineering Task Force).

[0061]

The information of the other party who performs file exchange which same processing was performed also in the personal computer 54, and the user of the personal computer 54 specified as the user lists 172 is registered. This is the same also in other devices.

[0062]

Next, the example of the file exchange using this invention is explained with reference to drawing 6 and drawing 7. Drawing 6 shows the example which transmits the dynamic image file which the digital camcorder 51 belonging to the group 81 photoed and recorded via a network to the personal computer 54 belonging to the same group (group 81) by the demand of the digital camcorder 51.

[0063]

The dynamic image file which the digital camcorder 51 transmits is recorded on the archive medium 115 as follows, for example. That is, if a user operates the operation input section 119 and orders it an image pick-up, CPU112 will control the camera function part 117, will enter in the photoelectric conversion part 114 the light of a picture which wants to drive and picturize the optical lens part 118, and will be transformed to an electrical signal. Compression encoding of the electrical signal is supplied and carried out to the image signal processing part 113. The image signal processing part 113 makes the image data which carried out

compression encoding supply and record on the archive medium 115 via the media interface 116.

[0064]

At this time, the attribution information which shows a directory entry whether it is that a file is photoed by private life is recorded on "private" 194 (drawing 8 mentioned later). CPU112 [ namely, ] of the digital camcorder 51, When an animation and a still picture are stored in the archive medium 115 as a file, Detect an input route from the value of the register to build in, and the animation or still picture, When it judges with having picturized via the photoelectric conversion part 114, "FF" is set to "private" 194 (when it judges with it being the picture picturized to private life), and "00" is set when it judges with it not being the picture picturized to private life.

[0065]

When it does not have an attribute which shows that a file is photoed by private life, transmitting the file to other devices is forbidden (when it is not what was photoed by private life). That is, when ordered in the registration to the file list 154 from a user, CPU112 of the digital camcorder 51 reads "private" 194 of the file from a file directory, and registers into the file list 154 only the file photoed by private life. Thereby, an exchangeable file is restricted.

[0066]

In Step S21, the archive medium 115 of the digital camcorder 51 holds the dynamic image file recorded as mentioned above. And when a user operates the operation input section 119 and inputs instructions of a file transfer, CPU112 of the digital camcorder 51, The communications department 120 is controlled, its own ID (ID of a transmitting agency) is attached, and the signal which requires reception of a file is made to transmit to the personal computer 54 via the server 42.

[0067]

In Step S41, CPU91 of the personal computer 54, In [ if the signal which requires reception of the file from / from the communications department 99 / the digital camcorder 51 is received via the server 42 ] Step S42, It detects to which group ID

of transmitting [ the received signal ] origin belongs with reference to the user lists 172, and it is judged whether it is that the digital camcorder 51 belongs to the same group. As mentioned above, also in the personal computer 54, ID of the partner by whom file exchange is permitted is beforehand registered into the user lists 172 like the case in the digital camcorder 51. It is judged by the user whether a file is acquired from the archive medium at hand, the residue of a battery, etc.

[0068]

CPU91 of the personal computer 54 controls the communications department 99, and makes the response corresponding to the demand which received at Step S41 transmit to the digital camcorder 51 via the server 42 in Step 43. They are made by the instructions which acquire a file from a user and and the digital camcorder 51 and the personal computer 54, When it belongs to the same group (to the user lists 172 memorized by the storage parts store 98 of the personal computer 54.) When the group of the digital camcorder 51 is remembered to be the same group 81 as the personal computer 54, this response turns into a response of a transmission permission. On the other hand, in belonging to the group from whom instructions of reception of a file are not inputted or both differ from a user, this response turns into a response of transmitting disapproval.

[0069]

In Step S22, CPU112 of the digital camcorder 51 receives the response from [ from the communications department 120 ] the personal computer 54 via the server 42. Since transmission was permitted in now, a user makes the file list 154 reference and chooses a file to transmit to. When the file which is not registered into the file list 154 is chosen, CPU112 displays an error message and refuses transmission. When a right file is chosen, in Step S23 CPU112, Control the communications department 120, the file information (a file name and a file size are included) of a file to transmit is made to transmit to the personal computer 54 via the server 42, and FTP server 156 (or HTTP server 158 may be used) is started.

[0070]

In Step S44, via the server 42, CPU91 of the personal computer 54 receives the file

information, and holds it from the communications department 99 to the storage parts store 98. And CPU91 of the personal computer 54 starts FTP client 175 (or HTTP client 177 may be sufficient), and makes it connect with FTP server 156 (or HTTP server 158) of the digital camcorder 51.

[0071]

CPU112 (FTP server 156 (or HTTP server 158)) of the digital camcorder 51 controls the communications department 120, and makes transmission to the personal computer 54 of the data of a file to transmit start via the server 42 in Step S24. That is, the data of the file made into the transfer subject among the files currently recorded on the archive medium 115 is read via the media interface 116. The image signal processing part 113 supplies this data to the communications department 120 via CPU112. The communications department 120 transmits this data to the personal computer 54 via the server 42.

[0072]

In Step S45, CPU91 (FTP client 175 (or HTTP client 177)) of the personal computer 54 receives the file data from [ from the communications department 99 ] the digital camcorder 51 via the server 42. In Step S46, CPU91 of the personal computer 54, When the received data reaches the file size held by processing of Step S44, operation of FTP client 175 (or HTTP client 177) is suspended (when all data is received), and the data received by then is held to the storage parts store 98.

[0073]

On the other hand, when connection is completed for a certain reason in the middle of reception (when not having reached the file size which the received data of a file hold), CPU91 of the personal computer 54 stops operation of FTP client 175 (or HTTP client 177), and holds the data received by then to the storage parts store 98. And CPU91 detects a resume starting position (position of the last of received data). CPU91 of the personal computer 54 controls the communications department 99, and makes a resume starting position transmit to the digital camcorder 51 via the server 42 in Step S47.

[0074]

In Step S25, via the server 42, CPU112 of the digital camcorder 51 receives the resume starting position from [ from the communications department 120 ] the personal computer 54, and stops operation of FTP server 156 (or HTTP server 158). In Step S26, CPU112 of the digital camcorder 51, When ordered in elimination of transmitted data from a user, it divides into the file of transmitted data, and the file of non-send data, and the file of transmitted data is eliminated in the resume starting position which received the data of the file of a transmission object. Thereby, the storage capacity of the part of the archive medium 115 increases, and new data becomes recordable.

[0075]

Although it judges whether a user acquires a file from the archive medium at hand, the residue of a battery, etc. and was made to order in an above-mentioned example, When transmitting the dynamic image file recorded on the digital camcorder 51 by the place where one has gone to the personal computer 54 at the house under absence, CPU91 of the personal computer 54 will make the same judgment itself.

[0076]

Therefore, in such a case, a user in the personal computer 54. Setting up beforehand size receivable from the availability of a hard disk (storage parts store 98), or the residue of a battery etc., CPU91 of the personal computer 54 judges whether a file fulfills the condition, and returns the response corresponding to a decision result.

[0077]

Conversely, the personal computer 54 requires transmission of a file of the digital camcorder 51 which possesses the dynamic image file currently recorded, and, as for drawing 7, indicates the example which receives a file to be an example of drawing 6 to it.

[0078]

CPU91 of the personal computer 54 controls the communications department 99, and makes the signal which requires transmission of a file transmit to the digital



camcorder 51 via the server 42 in Step S81.

[0079]

In Step S61, CPU112 of the digital camcorder 51, If the signal which requires transmission of the file from the personal computer 54 is received via the communications department 120, in Step S62, it will be judged whether the personal computer 54 belongs to the same group as itself with reference to the user lists 152. In the case of this example, the personal computer 54 and the digital camcorder 51, Since it belongs to the same group (group 81), in Step S63, CPU112 of the digital camcorder 51 controls the communications department 120, and returns the response of transmitting consent to the personal computer 54 via the server 42. When the personal computer 54 does not belong to the same group, a response non-consenting to transmitting is returned at this time.

[0080]

In Step S82, CPU91 of the personal computer 54 receives the response (response of transmitting consent) from the digital camcorder 51 via the communications department 99. CPU91 of the personal computer 54 controls the communications department 99, and makes the file name which wants to receive via the operation input section 96 based on the instructions inputted by the user (I would like to hold) transmit to the digital camcorder 51 via the server 42 in Step S83.

[0081]

In Step S64, CPU112 of the digital camcorder 51 receives the file name which wants to receive the personal computer 54 via the communications department 120. In Step S65, it is judged to CPU112 whether the thing (it is an exchangeable file (file by which exchange is permitted)) with proper information on the file is expressed with reference to the file list 154. CPU112 of the digital camcorder 51, When it judges with expressing the thing (the file is exchangeable) (it is the file which is registered into the file list 154 and by which exchange is permitted) with the proper file information, the communications department 120 is controlled, The file size is made to transmit to the personal computer 54 via the server 42, and FTP server 156 (or HTTP server 158) is started.

[0082]

CPU112 of the digital camcorder 51, When it judges with expressing what (exchange is not permitted) the file information is not fitness (the file is not exchangeable), the communications department 120 is controlled and the notice which cannot transmit is made to transmit to the personal computer 54 via the server 42 in Step S65.

[0083]

In [ when the thing (the file is an exchangeable file (it is a file by which exchange is permitted)) with proper file information is expressed ] Step S84, CPU91 of the personal computer 54 controls the communications department 99, receives the file size transmitted from the digital camcorder 51 via the server 42, and holds it to the storage parts store 98. And CPU91 of the personal computer 54 starts FTP client 175 (or HTTP client 177), and makes it connect with FTP server 156 (or HTTP server 158) of the digital camcorder 51.

[0084]

In [ when what (exchange is not permitted) file information is not fitness (the file is not exchangeable) is expressed ] Step S84, CPU91 of the personal computer 54 receives the notice which is transmitted by the communications department 99 from the digital camcorder 51 via the server 42 and which cannot be transmitted, and ends processing.

[0085]

CPU112 (FTP server 156 (or HTTP server 158)) of the digital camcorder 51, After transmitting a file size to the personal computer 54, the communications department 120 is controlled and the data transfer of the file is made to start in Step S66 in Step S65.

[0086]

In Step S85, CPU91 (FTP client 175 (or HTTP client 177)) of the personal computer 54 receives the data of a file via the server 42 from the communications department 99. When the file size which the received data holds is reached, in Step S86, CPU91 of the personal computer 54 stops operation of FTP client 175 (or HTTP

client 177), and holds the received data to the storage parts store 98.

[0087]

On the other hand, when connection is completed for a certain reason in the middle of reception (when the data volume of the received data till then has not reached the file size held by processing of Step S84), CPU91 of the personal computer 54 stops operation of FTP client 175 (or HTTP client 177), holds the received data to the storage parts store 98, and detects a resume starting position (position of the last of received data). CPU91 of the personal computer 54 controls the communications department 99, and makes a resume starting position transmit to the digital camcorder 51 via the server 42 in Step S87.

[0088]

In Step S67, from the communications department 120, CPU112 of the digital camcorder 51 receives a resume starting position via the server 42, and stops operation of FTP server 156 (or HTTP server 158). When ordered in elimination of transmitted data from a user, in Step S68 CPU112 of the digital camcorder 51, In the resume starting position, the data of the file made into the transmission object now is divided into the file of transmitted data, and the file of non-send data, and the file of transmitted data is eliminated. Therefore, the capacity which can record a new file on the archive medium 115 of the digital camcorder 51 increases only the part.

[0089]

When transmitting processing of a file is interrupted on the way by a certain cause as mentioned above, the interrupted position is notified to the transmitting side from a receiver. In the transmitting side, when ordered in elimination of transmitted data from a user, it divides into two files in the position (resume starting position) which interrupted the file of the transmission object, and the file of transmitted data is eliminated.

[0090]

The file of a transmission object is divided into the file of transmitted data, and the file of non-send data, and the processing which eliminates the file of transmitted

data is explained with reference to drawing 8 thru/or drawing 13.

[0091]

The example of the directory entry of the file which the file manager 153 manages is shown in drawing 8. The number of the top chord in a figure shows the byte position expressed with the hexadecimal number which begins from 0 of a directory entry. "Name" A file name is memorized by 191 and to "extension name" 192. the extension (for example, the case of an MPEG 2 (Moving Picture Experts Group phase2) format -- ".mpg".) of a file In an AVI (Audio Video Interleaving) format, ".avi" is memorized. The attribute of a file is memorized by "attribute" 193. The attribute whether to be the exchangeable file judged by the extension of a file is one of the attributes of a file, for example.

[0092]

[ "private" ] The attribution information which shows whether it is that a file is a file of the picture photoed by "it is private" is recorded on 194. The data of "private" 194 by CPU112 of the digital camcorder 51. It is set when an animation or a still picture is stored in the archive medium 115 as a file, and it is judged whether a file is registered into the file list 154 with this data of "private" 194. Namely, since a file is the image data picturized to private life when "private" 194 are "FF", It registers with the file list 154, and since a file is not the image data picturized to private life when "private" 194 are "00", it does not register with the file list 154.

[0093]

The data (address) which expresses the head byte position of the clusters (cluster of the archive medium 115) in which the data of this file is stored, and in the sector of a leading cluster to "byte position in sector" 196 is memorized. The data (address) showing the heading sector position in the leading cluster is memorized by "sector position in cluster" 197. The number (position) of a leading cluster is divided into "leading cluster number (High)" 198 and "leading cluster number (Low)" 201, and is memorized. The size of the file is memorized by "file size" 202. That is, when the file of transmitted data is eliminated, the file manager 153 changes these data (address) (updating).

[0094]

"Recording time" 199, the time when the file was recorded on "record date" 200, and a date are memorized, respectively. "Request-to-print-out-files" 195 are an intact field.

[0095]

When the file of transmitted data is eliminated as for the file manager 153, "Name" Although the file name memorized by 191 does not change, "byte position in sector" 196, "sector position in cluster" 197, "leading cluster number (High)" 198, "leading cluster number (Low)" 201, and "file size" 202, It is made to change into the thing of the file of non-send data after division from the thing of the original file before transmission (before division). "Recording time" 199 as a time stamp and "record date" 200 are changed into the thing of the last change time.

[0096]

Drawing 9 shows the example of FAT32 as FAT which the file manager 153 manages. The details of FAT32 are indicated by "Microsoft Extensible Firmware Initiative FAT32 File System Specification." The number in the entry 211 of FAT32 expresses the following FAT entry number (only the lower 2 figure of the hexadecimal numbers is shown for simplification). In drawing 9, "RSV" of "00000000" and "00000001" is a field used in Windows (registered trademark). EOF (End Of File) expresses the terminal point of a file, and "-" means "00000000" and it expresses "it is intact."

[0097]

Four files are registered in the example of drawing 9. The head of one file was located in "00000007", the continuation was located in "00000008", and the file is ended by "00000009." Similarly "00000029", "0000001B", "00000011", "00000012", "00000013", "00000014", One file is registered into "00000003" and other one file, "0000001F", "00000025", "00000031", Register with "00000030" and one file of further others, It registers with "0000002C", "0000002D", "0000002E", "0000002F", "00000038", "00000039", "0000003A", and "0000003B."

[0098]

Drawing 10 shows the example of the relation between the memory in FAT32, and a actual file. "00000000" (it corresponds to "-" in drawing 9) of the contents of FAT32 means un-using it, and "FFFFFFFF" expresses an end.

[0099]

In the case of the example of drawing 10, it is a FAT entry number (since it is equal to a cluster number) of the head of a file. the following and a cluster number -- calling -- since it is "0000130A", the data 232 of the cluster "0000130A" of the data areas 221 of the archive medium 115 turns into data of the head of a file. And since the contents of FAT32 of a leading cluster number "0000130A" are "0000101E", the data 231 memorized by the cluster number "0000101E" of the data area 221 turns into the following data. Hereafter, in a similar manner, after a cluster number "0000101E", since a cluster number continues with "00004091", "00004092", and "0000C12B", the data 233, 234, and 235 of the data area 221 will follow the data 231. After a cluster number "0000C12B", since the contents of FAT32 of "0000C12C" are "FFFFFFFF", the data of the file serves as the last by the data 236.

[0100]

Drawing 11 divides into two the file shown in drawing 10 in a resume starting position, and shows the composition of the file after eliminating a transmitted file. The point A shows a resume starting position and the slash part of the data area 221 shows transmitted data (to the point A of the data 231 and 232 and the row data 233) (eliminated data). Therefore, the file of the data which is not transmitted after eliminating the file of transmitted data comprises data from the point A of the data 233 to the last, and the data 234 thru/or 236.

[0101]

The processing which eliminates a file is explained in detail with reference to the flow chart of drawing 12. In Step S101, CPU112 (file manager 153) of the digital camcorder 51, At Step S25 of drawing 6, or Step S67 of drawing 7, the "resume starting position" received from the personal computer 54 is broken by "size of one cluster", and it is judged whether a quotient is "0." When judged with a quotient being "0", transmitted data, Since it will be less than one cluster (the head of

untransmitted data) Since it is located in the same cluster as the head of the data before transmission, advance processing to Step S102 and CPU112, "Leading cluster number (High)" 198 of the directory entry of a file and "leading cluster number (Low)" 201 are not changed (special processing is not performed).

[0102]

In Step S101, CPU112 of the digital camcorder 51 advances processing to Step S103, when it judges with a quotient not being "0", and only the part of the value of a quotient moves a leading cluster. For example, since a quotient is set to "2", in the example of drawing 11 CPU112, Two leading clusters are moved and "leading cluster number (High)" 198 of the directory entry of a file and the value of "leading cluster number (Low)" 201 are changed by making the 3rd cluster "00004091" (cluster of the data 233) into a leading cluster (updating).

[0103]

In Step S104, after processing of Step S102 or Step S103, CPU112 of the digital camcorder 51, The sector position in a cluster and the byte position are computed from "it being a sector number per cluster", and "it being a number of bytes per sector", [ which is stored in BPB (BIOS Parameter Block) ] "Sector position in cluster" 197 of the directory entry of a file are memorized to "byte position in sector" 196. In the case of the example of drawing 11, the sector position in a cluster in the resume starting position A and the byte position in a sector are memorized. CPU112 of the digital camcorder 51 is changed into the size (size of the file of untransmitted data) after eliminating "file size" 202 of the directory entry of a file in Step S105. In the case of the example of drawing 11, it is changed into the size of the point A of the data 233 to the last, and the file which comprises the data 234 thru/or 236.

[0104]

In Step S106, CPU112, the contents of the FAT entry corresponding to the cluster number (drawing 11 -- an example -- a case -- the cluster "0000101E" of the data 231 and the data 232 and "0000130A") of the cluster which eliminated data are changed into "it is intact" ("00000000"), and processing is ended.

[0105]

Drawing 13 shows the example of change of the field of a directory entry. In this example, by processing of Step S103 of drawing 12, "leading cluster number (high)" 198, "Leading cluster number (low)" 201 is changed into the cluster number "00004091" corresponding to the data 233 from the cluster number "0000130A" corresponding to the data 232. "Sector position in cluster" 197 and "byte position in sector" 196 are changed into the value "003A" of a resume starting position, and "seven A05" from the first value "0000" by processing of Step S104 of drawing 12. The contents of "file size" 202 are changed into the size "5EA7" after elimination from the size "7FFF" before elimination by processing of Step S105 of drawing 12.

[0106]

After transmission is interrupted irrespective of whether processing of the above division and elimination was performed, transmission of the non-data transmitting of a file is started to predetermined timing. Operation of resending of this file is explained with reference to drawing 14. Like the example of drawing 6, this operation is similarly performed, also when reception of a file is required of a receiver from the transmitting side, and when transmission of a file is required of the transmitting side from a receiver like the example of drawing 7.

[0107]

In Step S131, CPU112 of the digital camcorder 51 transmits the file name and file size of a file to resend based on the instructions from a user to the personal computer 54 via the communications department 120. In Step S141, in Step S142, CPU91 of the personal computer 54 will determine an offset valve position, if the file name and file size which have been transmitted from the digital camcorder 51 are received.

[0108]

The decision processing of an offset valve position is explained with reference to drawing 15 and drawing 16. Drawing 15 shows the composition of the data of a file. The file 240 before transmission is divided into the file of the transmitted data 241, and the file of the non-send data 242. The boundary of the transmitted data 241 and



the non-send data 242 is expressed in the resume starting position A. This resume starting position expresses the position from the head of the file 240.

[0109]

The decision processing of an offset valve position is explained with reference to drawing 16. In Step S151, CPU91 of the personal computer 54, From the digital camcorder 51, the file size received by processing of Step S141, It receives by processing of Step S44 of drawing 6, or Step S84 of drawing 7, and it is judged whether it is in agreement with the file size (file size of the file 240 of a yuan) in the file information currently held at the storage parts store 98.

[0110]

In Step S151, CPU91 of the personal computer 54, The file size currently held and the file size received at Step S141 are in agreement (the file size received at Step S141). When it judges with it being a file size of the file 240 of drawing 15, since division of a file and elimination are omitted, the digital camcorder 51 advances processing to Step S152, and sets a resume starting position as offset of the transfer start position of a file. That is, in this case, the digital camcorder 51 is that (the file transmission before and after transmission is the same) which has not eliminated the transmitted data of a file, and CPU91 of the personal computer 54 needs to make offset of the transfer start position of a file the resume starting position A.

[0111]

On the other hand in Step S151, CPU91 of the personal computer 54, When it judges with a file size currently held and a received file size being in agreement, and there not being (the received file size is not the size of the file 240), It is judged whether the value which advanced processing to Step S153 and added the resume starting position (point A) to the received file size is equal to the file size (size of the file 240) currently held. That is, if phi RUSAZU which received is the size of the file of the non-send data 242 as shown in drawing 15, the value which added the value (data volume of the transmitted data 241) of the resume starting position (point A) to it will become equal to the size of the original file 240.

[0112]

In Step S153, CPU91 of the personal computer 54, When it judges with the received file size being the size of the file of the non-send data 242, since the digital camcorder 51 has eliminated the file of transmitted data, it advances processing to Step S154. In Step S154, CPU91 of the personal computer 54 sets "0" as offset of the transfer start position of a file. When it judges that the received file size is not in agreement with the size of the file of the non-send data 242 at Step S153, error handling is performed at Step S155.

[0113]

Return to drawing 14 and in Step S143 CPU91 of the personal computer 54, The communications department 99 is controlled, the determined offset is set up as a parameter (FTP has a parameter which specifies a transfer start position as offset), and the signal which requires resending of a file is made to transmit to the digital camcorder 51.

[0114]

In Step S132, CPU112 of the digital camcorder 51 receives the signal which requires resending from the personal computer 54 via the communications department 120. CPU112 of the digital camcorder 51 controls the communications department 120, and makes the file of the non-data transmitting 242 transmit to the personal computer 54 in Step S133. When offset is made into the resume starting position, the data 242 from the resume starting position A of the file 240 is transmitted, and when offset is set to "0", data is transmitted from the head of one new file which comprises the data 242.

[0115]

In Step S144, CPU91 of the personal computer 54, If the data transmitted from the digital camcorder 51 is received via the communications department 99, in Step S145, it will compound with the data (data 241 received by processing of Step S45 of drawing 6, or Step S85 of drawing 7) currently held, and will be considered as one file. In the case of an offset = resume starting position, this composition is performed by FTP client 175 like the conventional case. On the other hand, in the

case of offset =0, a compositing process is performed by the file manager 173. A compositing process can be made to perform at FTP client 175 in the case of offset =0.

[0116]

When connection breaks off data again in the middle of resending, same processing is performed again.

[0117]

Although resume information and private information were managed by the directory entry of a file above, it registers with a file list and may be made to manage.

[0118]

The judgment of whether a file is photoed by private life, In the case of the data structure of MPEG 2-PS (Moving Picture Experts Group phase 2 - Program Stream). The information having recorded on the bit [ 105 thru/or 109th ] reserved area of the pack header by private life turns out to be can be embedded, and it can also carry out based on it. For example, when a photograph is taken by private life, "1" is set to a reserved area, and "0" is set to a reserved area when it is not what was photoed by private life.

[0119]

Open MG (trademark), DTCP (Digital Transmission Copy Protection), etc., Only the file by which the copy is permitted can also be limited as an exchangeable file using the art of preventing the illegal copy of digital contents.

[0120]

In above-mentioned explanation, although the power supply 90 of the personal computer 54 which receives a file was started beforehand, When the user of the digital camcorder 51 wants to transmit a file to the personal computer 54 of the house under absence for example, it is necessary for a user to start the personal computer 54 from the exterior, and to transmit a file. In this invention, a user starts the personal computer 54 from the exterior, and shows below other embodiments which transmit a file.

[0121]

Drawing 17 shows the example of composition of the network adaptor 250 prepared for the communications department 99 of the personal computer 54.

[0122]

The power supply part 258 supplies electric power required for each part of the network adaptor 250 based on the electric power supplied via the input/output interface 95. If the user of the digital camcorder 51 orders it a startup of the personal computer 54, CPU112 will transmit the data (frame) which orders it a startup of the personal computer 54 from the communications department 120 via the network containing LAN (Ethernet (R)). It is received by the personal computer 54 via the network containing LAN (Ethernet (R)), and this data (frame) is supplied to the connector 251. The data supplied to the connector 251 is supplied to the physical layer controller 253 via the pulse transformer former 252.

[0123]

The data inputted into the physical layer controller 253 is further supplied to the LAN controller 254. The LAN controller 254 is packet-ized by the packet based on a LAN standard (for example, Ethernet (R)) which received, and is made to hold to RAM257. The LAN controller 254 is sent to transmitting [ request sending ] origin, when the header and footer for an address or error detection are managed and the error under transmission is detected. The LAN controller 254 supplies a seizing signal to the seizing signal feed zone 255, when it is start data from the partner who can start the received data (it mentions later with reference to drawing 18 for details). The seizing signal feed zone 255 supplies a seizing signal to CPU91 via I/O interface 95, and CPU91 starts the power supply 90 of the personal computer 54. The return from sleeping, a suspend state, or a resume state is also included in this starting.

[0124]

CPU91 instructions of transmission of the data to the digital camcorder 51 will supply send data to the LAN controller 254 via the input/output interface 95. The LAN controller 254 assembles a packet according to a LAN standard, and makes

the send data hold from the supplied send data to RAM257. The LAN controller 254 supplies the held send data to the physical layer controller 253. The physical layer controller 253 changes send data into the signal which suited the signal standard of the transmission medium, and supplies it to the pulse transformer former 252. The pulse transformer former 252 transmits the supplied send data to an external network via the connector 251 from the network containing LAN (Ethernet (R)).

[0125]

The remote-start program which makes this network adaptor 250 perform remote-start processing is stored in ROM256.

[0126]

The network adaptor 250 explains the processing which starts the power supply 90 of the personal computer 54 with reference to the flow chart of drawing 18.

[0127]

In Step S171, the LAN controller 254 receives the frame transmitted from the communications department 120 of the digital camcorder 51 via LAN, the connector 251, the pulse transformer former 252, and the physical layer controller 253. The example of this received frame is shown in drawing 19.

[0128]

The frame 270 generated by the router (not shown) of LAN (Ethernet (R)) comprises a header and a data division. The header comprises the transmission destination MAC (Media Access Control) address 271 and transmitting agency MAC Address 272. The transmission destination of the frame in the LAN and the MAC Address of a transmitting agency are stored in each. With a MAC Address (IEEE (Institute of Electrical and Electronic Engineers) address). It is the 48-bit address decided for every apparatus on the network, and in the first half, 24 bits is ID peculiar to a vendor managed in IEEE, and 24 bits has become the consecutive numbers which each vendor assigned in the second half.

[0129]

In now, the IP packet is stored in the data division. The IP packet comprises a header which comprises transmitting agency IP address 281 and transmission

destination IP address 282, and data containing Magic Packet(registered trademark)283. Magic Packet283 is a packet which has the information for starting apparatus by remote control. The IP address of a transmission destination is stored in transmitting agency IP address 281 and transmission destination IP address 282 the transmitting origin of this IP packet on the Internet, respectively.

[0130]

In Step S172, the LAN controller 254 judges whether Magic Packet283 exists in the received frame 270. When it judges with Magic Packet283 existing, the LAN controller 254 advances processing to Step S173, and judges whether a transmitting agency is the start permission person beforehand remembered by RAM257. A user used to specify the MAC Address of the partner who permits starting, CPU91 used to supply a start permission person to the LAN controller 254 via the input/output interface 95, and the LAN controller 254 used to remember him to RAM257. It changes to RAM257, nonvolatile memories, such as EEPROM, are provided, and it may be made to make it memorize there.

[0131]

The example of Magic Packet283 is shown in drawing 20. Magic Packet283 After "FFFFFFFFFFFF", A MAC Address (in the case of the example of drawing 20 "01 02 03 04 05 06") is repeated 16 times, and the MAC Address (in the case of the example of drawing 20 "77 8899 AA BB CC") of the transmitting agency is added further. When the transmitting origin of this Magic Packet283 is the digital camcorder 51, that MAC Address is described here. The LAN controller 254 judges whether the MAC Address of the transmitting origin added to this Magic Packet283 is a start permission person's MAC Address beforehand memorized by RAM257.

[0132]

In Step S173, when it judges with a transmitting agency being a start permission person, in Step S174, the LAN controller 254 transmits a seizing signal to the seizing signal feed zone 255. In Step S175, the seizing signal feed zone 255 transmits a seizing signal to CPU91 via the input/output interface 95. When this seizing signal is received, CPU91 controls the power supply 90 and makes electric

power required for each part supply.

[0133]

In the step S173 when judged with Magic Packet283 not existing in the received frame 270 in Step S172, Since the LAN controller 254 cannot be started when judged with a transmitting agency not being a start permission person, processing is advanced to Step S176 and the received frame 270 is canceled. That is, the power supply 90 is not started in this case.

[0134]

Thus, since the power supply 90 is started only when the transmitting agency is memorized beforehand, what the personal computer 54 is unjustly used is controlled.

[0135]

By such processing, the user of the digital camcorder 51 explains the operation which starts the personal computer 54 from the outside with reference to drawing 21.

[0136]

When ordered transmission of the file to the personal computer 54 by the user, in Step S191 CPU112 of the digital camcorder 51, The signal which checks the state of the power supply 90 of the personal computer 54 is transmitted to the personal computer 54 via a network from the communications department 120. That is, the digital camera 51 requires transmission of the signal showing one [ the power supply 90 ] of the personal computer 54. In Step S211, CPU91 of the personal computer 54 receives the signal which checks a power supply state from the digital camcorder 51 via the communications department 99.

[0137]

In Step S212, CPU91 transmits a power turn signal or a power source off signal to the digital camcorder 51 via a network based on the state where the state of the power supply 90 was detected and detected, from the communications department 99. In Step S192, CPU112 receives a power turn signal or a power source off signal from the personal computer 54 via the communications department 120.

[0138]

In [ when CPU112 receives the power source off signal showing the power supply 90 being an OFF state (sleeping, a resume state, or a suspend state) ] Step S193, The signal (frame 270 containing Magic Packet283) which directs a power turn is transmitted to the personal computer 54 via the communications department 120. In Step S213, CPU91 receives instructions of a power turn via the network adaptor 250 prepared for the communications department 99. In [ the network adaptor 250 processes drawing 18 and ] Step S173, When judged with the digital camcorder 51 being a start permission person (the MAC Address of drawing 20 is a MAC Address memorized by RAM257), a seizing signal is supplied to CPU91 via the input/output interface 95 from the seizing signal feed zone 255. CPU91 starts the power supply 90 based on this seizing signal.

[0139]

File transmission processing (drawing 6) is performed after processing of drawing 21, and the personal computer 54 receives the file which the digital camcorder 51 transmitted. After transmitting a file, fixed time passes, and also when performing processing (drawing 14) which resumes file transmission, the digital camcorder 51 processes drawing 21, it is in the state which the power supply 90 of the personal computer 54 started, and transmits a file.

[0140]

Since the personal computer 54 is already started when the signal received at Step S192 is a power turn signal, processing of Step S193, therefore Step S213 is not performed. In this case, file transmission processing (drawing 6) is performed after processing of Step S192. An order of the decision processing of Steps S172 and S173 may be changed.

[0141]

Thus, in this invention, when the transmission destination of a file has not started, a file can be transmitted, after making it start from the outside. And since the other party is checked, the personal computer 54 can be prevented from being used unjustly.



[0142]

The user of the digital camcorder 51 orders and other embodiments which start the personal computer 54 are described with reference to drawing 22.

[0143]

In Step S231, CPU112 of the digital camcorder 51 transmits the signal which checks the state of the power supply 90 of the personal computer 54 via the communications department 120. In Step S251, CPU91 of the personal computer 54 receives the signal which checks the state of the power supply 90 from the digital camcorder 51 via the communications department 99. In Step S252, CPU91 detects the state of the power supply 90 and transmits a power turn signal or a power source off signal via the communications department 99. In Step S232, CPU112 receives a power turn signal or a power source off signal from the personal computer 54 via the communications department 120.

[0144]

In Step S233, CPU112 transmits the signal (frame 270 containing Magic Packet283) which orders it a power turn to the personal computer 54 via the communications department 120, when a power source off signal is received. In Step S253, CPU91 receives the signal which orders it a power turn via the communications department 99, and starts the power supply 90. In Step S254, CPU91 reports that the power supply 90 was started to the digital camcorder 51 via the communications department 99 with reference to transmitting agency IP address 281 of the frame 270. In Step S234, CPU112 receives a motive notice from the personal computer 54 via the communications department 120.

[0145]

If a motive notice is received, in Step S235, CPU112 will transmit the response to a notice to the personal computer 54 via the communications department 120. In Step S255, CPU91 will change the power supply 90 into the state of one, if the response to a notice is received from the digital camcorder 51 via the communications department 99. Then, as it mentioned above, transmitting and receiving processing of a file is performed.

[0146]

When the digital camcorder 51 does not answer the personal computer 54 in Step S235 (when the personal computer 54 does not receive the response to a notice), After publishing a notice at Step S254, when fixed time has passed, CPU91 turns off the power supply 90. When the signal received at Step S233 is a power turn signal, file transmitting and receiving processing is performed promptly.

[0147]

Thus, only when the partner who ordered it the startup answers to a motive notice, it is made to start the personal computer 54. Being used carelessly is controlled by the device which does not have by this a function in which the personal computer 54 answers a notice.

[0148]

Next, the embodiment of further others which starts the personal computer 54 using a server is described with reference to drawing 23.

[0149]

In Step S271, CPU112 of the digital camcorder 51 transmits the signal which checks the state of the power supply 90 of the personal computer 54 to the personal computer 54 via the communications department 120. In Step S311, CPU91 of the personal computer 54 receives the signal which checks the state of the power supply 90 from the digital camcorder 51 via the communications department 99. In Step S312, CPU91 detects a power supply state and transmits a power turn signal or a power source off signal to the digital camcorder 51 via the communications department 99. In Step S272, CPU112 receives a power turn signal or a power source off signal from the personal computer 54 via the communications department 120. Also in this case, when the received signal is a power turn signal, transmitting and receiving processing of a file is performed promptly.

[0150]

When a power source off signal is received, CPU112 transmits Magic Packet283 to the personal computer 54 via the communications department 120 in Step S273. In Step S313, CPU91 receives Magic Packet283 (signal which orders it a power turn)

from the digital camcorder 51 via the communications department 99.

[0151]

In Step S314, CPU91 transmits the specific request of the transmitting origin (digital camcorder 51) of Magic Packet283 to the user's information managing server 41 via the communications department 99. In Step S291, CPU91 (drawing 2) of the user's information managing server 41 is. The specific request of the transmitting origin for specifying whether the transmitting agency is registered beforehand via the communications department 99 from the personal computer 54 quoted also as composition of the user's information managing server 41 (are you the same group in now or not?) is received.

[0152]

At this time, CPU91 of the user's information managing server 41, The start permission person of the information currently held beforehand at the user's information database to the personal computer 54, For example, in [ acquire the IP address of the same group's 81 terminal unit (the digital camcorders 51 thru/or 53 and personal computer 55), and ] Step S292, The signal which checks whether Magic Packet283 has been transmitted to all the terminal units of the group 81 via the communications department 99 is transmitted. In Step S274, CPU112 of the digital camcorder 51 which is one of the terminal units of the group 81 receives the signal which checks transmission of Magic Packet283 via the communications department 120 from the user's information managing server 41. Other terminal units (the digital camcorders 52 and 53 and personal computer 55) of the group 81 receive this signal.

[0153]

In Step S275, each terminal unit checks whether he has transmitted Magic Packet283 to the personal computer 54, and outputs the checked result as a response. CPU112 of the digital camcorder 51 transmits the response of "having transmitted" to the user management information server 41 as a response to a transmitting check via the communications department 120. In Step S293, CPU91 of the user's information managing server 41 receives the response to a

transmitting check from the digital camcorder 51 via the communications department 99. When the response of "having transmitted" is received, in Step S294, CPU91 of the user's information managing server 41 transmits the signal with which a startup is permitted to the personal computer 54 via the communications department 99. In Step S315, CPU91 of the personal computer 54 receives the signal with which a startup is permitted from the user's information managing server 41 via the communications department 99. In Step S316, CPU91 starts the power supply 90.

[0154]

Since the transmitting origin of Magic Packet283 is not a start permission person in Step S293 when the user's information managing server 41 receives the response of "not transmitting" from all the terminal units of the group 81, In Step S294, CPU91 of the user's information managing server 41 transmits the signal of startup disapproval to the personal computer 54 via the communications department 99.

[0155]

Thus, the user's information managing server 41 permits a startup to the personal computer 54, only when a transmission destination is a start permission person. Since management by the user's information managing server 41 is performed in the case of this example, it becomes safer.

[0156]

The embodiment of further others which starts the personal computer 54 using a server is described with reference to drawing 24.

[0157]

When it turns off the power supply 90, CPU91 of the personal computer 54 sets up a password required at the time of a startup, and transmits a password to the user's information managing server 41 via the communications department 99 in Step S371. In Step S351, CPU91 of the user's information managing server 41 receives a password from the personal computer 54 via the communications department 99.

[0158]

In Step S331, CPU112 of the digital camcorder 51 transmits the signal which

checks the state of the power supply 90 of the personal computer 54 to the personal computer 54 via the communications department 120, when transmitting a file to the personal computer 54. In Step S372, CPU91 of the personal computer 54 receives the signal which checks the state of the power supply 90 from the digital camcorder 51 via the communications department 99.

[0159]

In Step S373, CPU91 detects the state of the power supply 90 and transmits a power turn signal or a power source off signal to the digital camcorder 51 via the communications department 99. In Step S332, CPU112 receives a power turn signal or a power source off signal from the personal computer 54 via the communications department 120. When a power turn signal is received, transmitting and receiving processing of a file is performed promptly.

[0160]

When a power source off signal is received, CPU112 transmits the signal which requires transmission of a password required at the time of starting to the user's information managing server 41 via the communications department 120 in Step S333. In Step S352, CPU91 of the user's information managing server 41 receives the signal which requires transmission of a password from the digital camcorder 51 via the communications department 99. CPU91 of the user's information managing server 41 judges whether the digital camcorder 51 is a start permission person of the personal computer 54 with reference to a user's information database. For example, since the digital camcorder 51 and the personal computer 54 belong to the same group 81 when it belongs to the same group and permits a startup, in Step S353, CPU91 transmits a password to the digital camcorder 51 via the communications department 99. A password is not transmitted when groups differ. For this reason, unjust use is prevented.

[0161]

In Step S334, CPU112 receives a password from the user's information managing server 41 via the communications department 120. In Step S335, CPU112 transmits the signal (Magic Packet283) which orders it the power turn which added the

password via the communications department 120. In Step S374, CPU91 receives Magic Packet283 from the digital camcorder 51 via the communications department 99. When the password added to Magic Packet283 is a password set up at Step S371, in Step S375, CPU91 starts the power supply 90. Though the password is not added or it was added, when it is not the password registered by processing of Step S371, the power supply 90 is not started.

[0162]

The example of Magic Packet283 which the digital camcorder 51 transmits to the personal computer 54 is shown in drawing 25. Magic Packet283 After "FFFFFFFFFFFF", A MAC Address (in the case of the example of drawing 25 "01 02 03 04 05 06") is repeated 16 times, and the password (when it is an example of drawing 25, it is "FF 00 FF 00 FF 00 ... 00") is added. Therefore, the personal computer 54 judges whether the password added to Magic Packet283 is a password transmitted to the user's information managing server 41 at Step S371.

[0163]

Thus, the possible partner of a start permission can be restricted by adding a password to Magic Packet283.

[0164]

Although the start permission person was made into the partner belonging to the same group in above-mentioned explanation, a user may set up a start permission person beforehand and it may register with the user's information of the user's information managing server 41.

[0165]

Although the case where image data was transmitted above from a digital camcorder at a personal computer was explained as an example, This invention can be applied to the information processor of PDA (Personal DigitalAssistants), a portable telephone, a portable personal computer, a digital still camera, and others.

[0166]

A series of processings mentioned above can also be performed by hardware, and can also be performed by software. In performing a series of processings by

software, The personal computer and digital camcorder in which the program which constitutes the software is included in hardware for exclusive use, Or it is installed in a personal computer, a digital camcorder, etc. which can perform various kinds of functions, for example, are general-purpose, etc. from a network or a recording medium by installing various kinds of programs.

[0167]

As shown in drawing 2 and drawing 3, this program storing medium a device main frame independently, . Are distributed in order to provide a user with a program. It is not only constituted by the package media which consist of the magnetic disks 101 and 131, the optical discs 102 and 132, the magneto-optical discs 103 and 133 or the semiconductor memory 104 and 134, the archive medium 115, etc. on which the program is recorded, but, It comprises ROM92 and the internal memory 111 on which the program is recorded, a hard disk contained in the storage parts store 98, etc. with which a user is provided in the state where it was beforehand included in the device main frame.

[0168]

In this specification, even if the processing serially performed in accordance with an order that the step which describes the program recorded on a recording medium was indicated is not of course necessarily processed serially, it also includes a parallel target or the processing performed individually.

[0169]

In this specification, a system expresses the whole device constituted by two or more devices.

[0170]

[Effect of the Invention]

As mentioned above, according to this invention, a file can be transmitted via a network. When transmission of a file is interrupted, a transmitted file is eliminated and it becomes possible to increase the capacity for newly recording only the part. As a result, it becomes possible to record new data if needed, and what misses what is called a shutter chance is controlled. It can be ordered starting from the

exterior and a file can be transmitted.

[Brief Description of the Drawings]

[Drawing 1] It is a figure showing the composition of the embodiment of the file exchange system which applied this invention.

[Drawing 2] It is a block diagram showing the composition inside the personal computer of drawing 1.

[Drawing 3] It is a block diagram showing the composition inside the digital camcorder of drawing 1.

[Drawing 4] It is a block diagram showing the personal computer of drawing 1, and the functional composition of a digital camcorder.

[Drawing 5] It is a figure explaining operation of user-lists creation.

[Drawing 6] It is a figure explaining operation of the file exchange system of this invention.

[Drawing 7] It is a figure explaining operation of the file exchange system of this invention.

[Drawing 8] It is a figure showing the composition of the directory entry in this invention.

[Drawing 9] It is a figure showing the example of FAT32.

[Drawing 10] It is a figure showing the composition of the file managed by FAT.

[Drawing 11] It is a figure showing the composition of the file after eliminating a transmitted file.

[Drawing 12] It is a flow chart explaining processing of transmitted file erasure.

[Drawing 13] It is a figure showing the example of change of a directory entry.

[Drawing 14] It is a figure explaining the retransmitting process of a file.

[Drawing 15] It is a figure showing the composition of a file.

[Drawing 16] It is a flow chart explaining offset-valve-position decision processing.

[Drawing 17] It is a block diagram showing the composition of the network adaptor prepared for the communications department of the personal computer of drawing 2.

[Drawing 18] It is a flow chart explaining the power supply starting processing of the network adaptor of drawing 17.



[Drawing 19]It is a figure showing the composition of a frame.

[Drawing 20]It is a figure showing the composition of Magic Packet of drawing 19.

[Drawing 21]A digital camcorder is a figure explaining the operation which starts a personal computer.

[Drawing 22]A digital camcorder is a figure explaining the operation which starts a personal computer.

[Drawing 23]A digital camcorder is a figure explaining the operation which starts a personal computer.

[Drawing 24]A digital camcorder is a figure explaining the operation which starts a personal computer.

[Drawing 25]It is a figure showing the composition of Magic Packet of drawing 19.

[Description of Notations]

41 A user's information managing server and 42 A server, 51 thru/or 53 A digital camcorder, and 54 and 55. A personal computer, 61, and 62 A digital camcorder, 63 personal computers, and 71 A digital camcorder, 72, and 73 A personal computer, 91 CPU, 92 ROM, and 93 RAM, 94 A bus and 95 An input/output interface, 96 An operation input section and 97 An outputting part and 98. A storage parts store and 99 The communications department and 111 An internal memory and 112. CPU and 113 An image signal processing part and 114. A photoelectric conversion part, 115 archive media, and 116. A media interface and 117 A camera function part, 118 An optical lens part and 119 An operation input section, 120 The communications department and 121 A liquid crystal display, 250 A network adaptor and 251 A connector and 252 A pulse transformer former and 253 A physical layer controller, a 254LAN controller, and 255 A seizing signal feed zone, 256 ROM, 257RAM, and 258 Power supply part

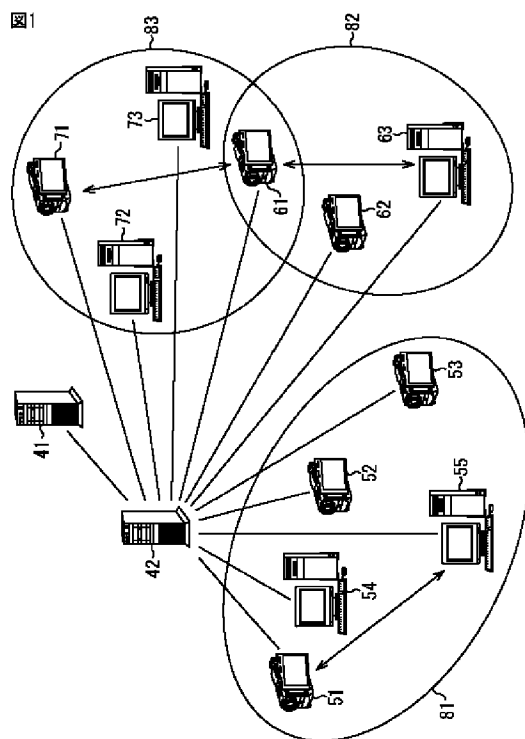
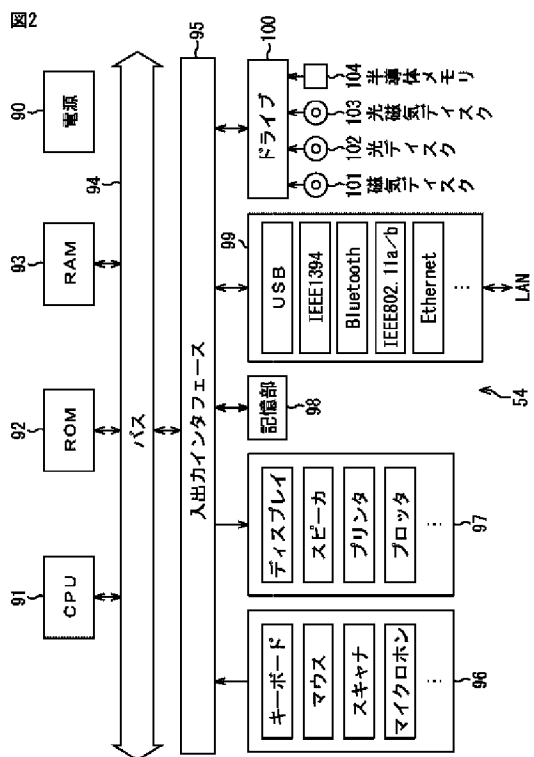
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## DRAWINGS

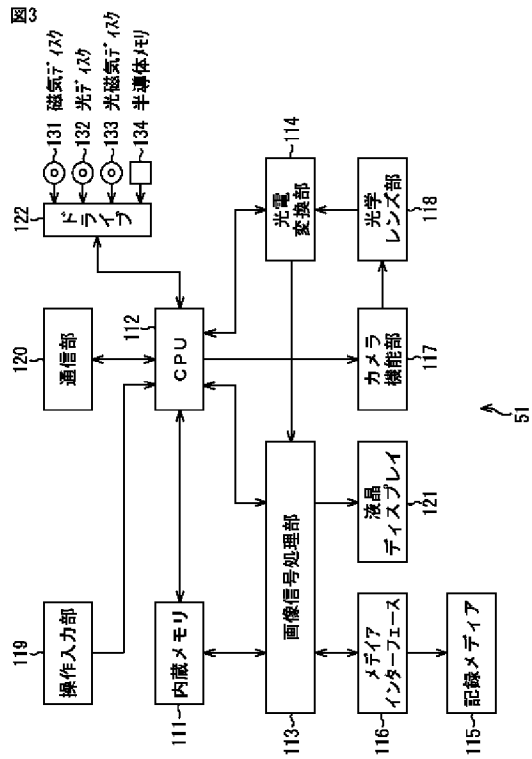
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[Drawing 1]

[Drawing 2]



[Drawing 3]



[Drawing 4]

[Drawing 5]

図5

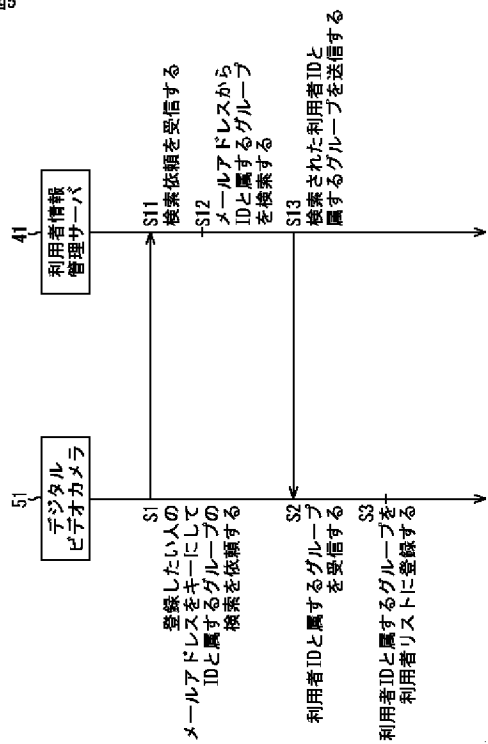
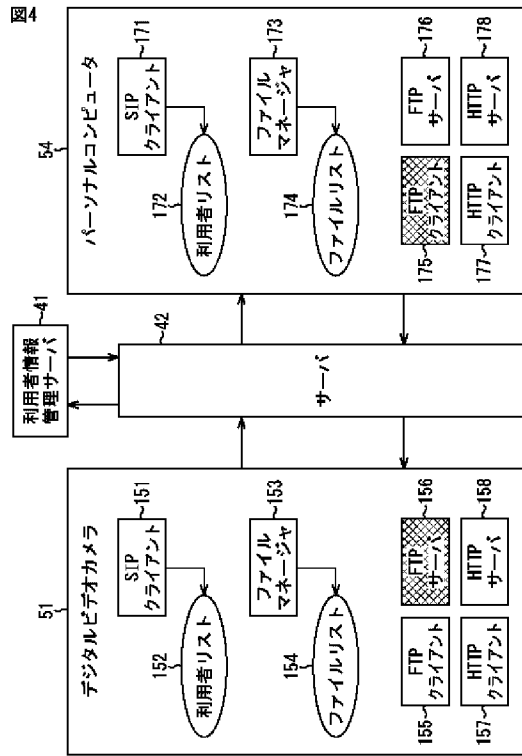
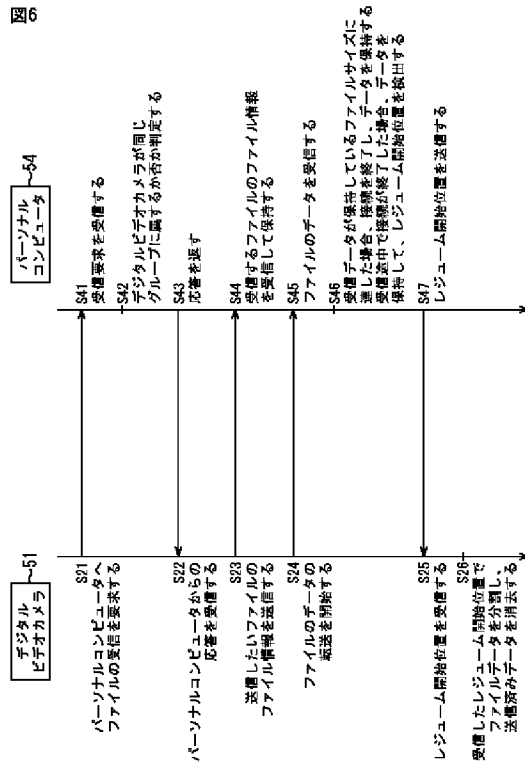


図4



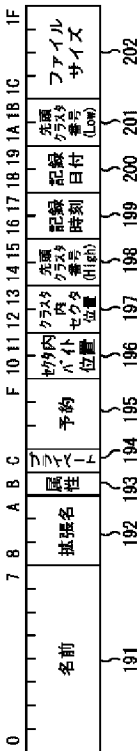
[Drawing 6]

図6



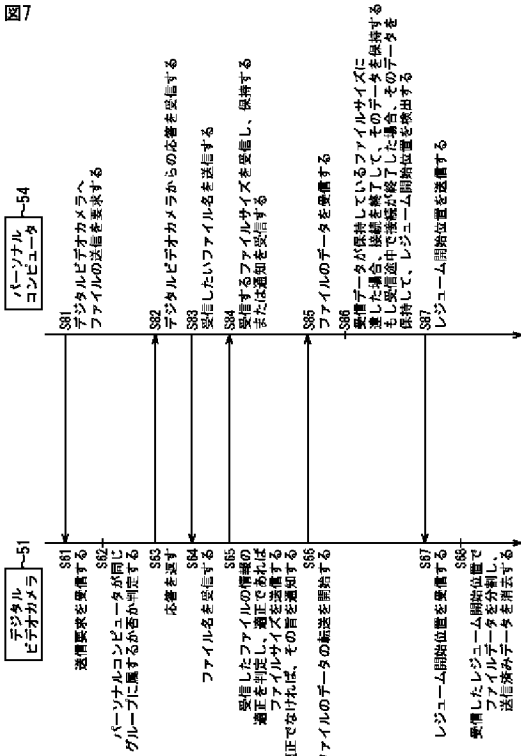
[Drawing 7]

図8



[Drawing 8]

図7



[Drawing 9]

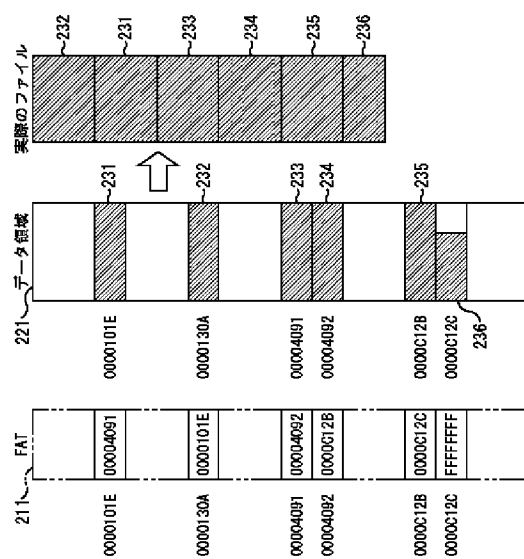
図9

FAT12H番号	+00	+01	+02	+03	+04	+05	+06	+07	+08	+09	+0A	+0B	+0C	+0D	+0E	+0F
00000000	RSV	RSV	—	EOF	—	—	—	8	—	9	EOF	1F	—	—	—	—
00000010	—	12	13	14	3	—	—	—	—	—	—	11	—	—	—	25
00000020	—	—	—	—	—	31	—	—	—	—	1B	—	—	2D	2E	38
00000030	EOF	30	—	—	—	—	—	—	39	3A	3B	EOF	—	—	—	—

211

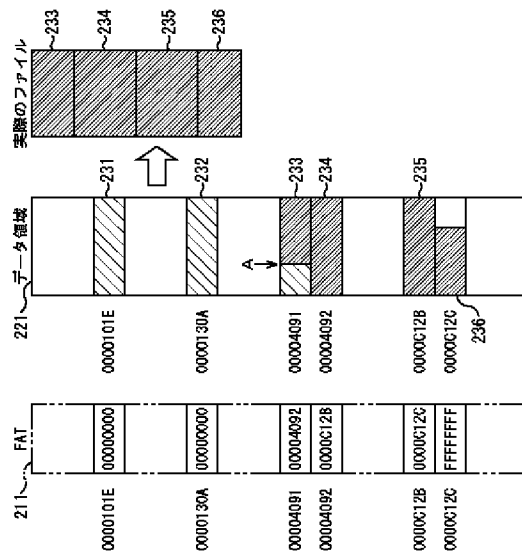
[Drawing 10]

図10



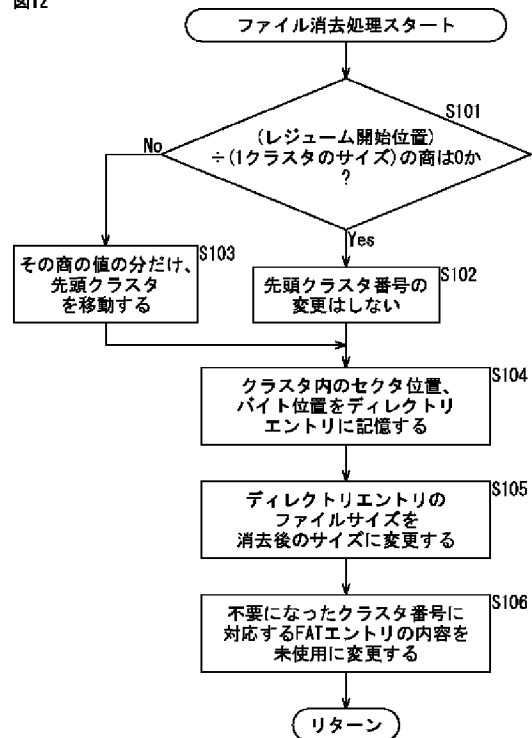
# [Drawing 11]

図11



# [Drawing 12]

図12





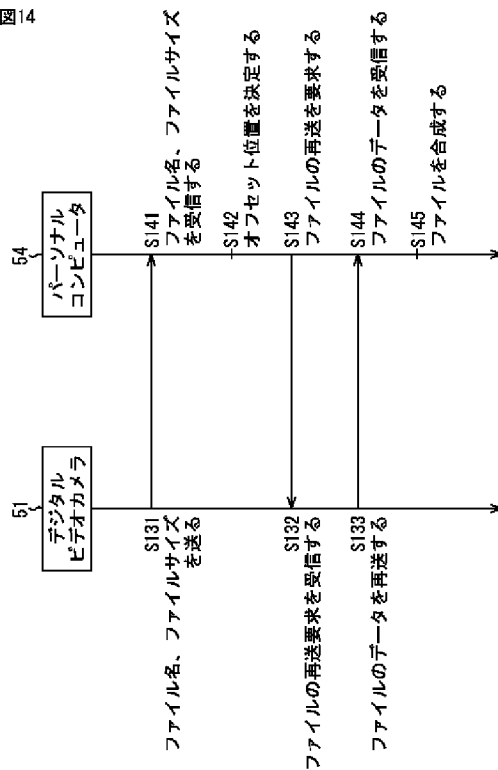
[Drawing 13]

図13

	転送済み部分消去前	転送済み部分消去後
先頭クラスタ番号 (high)	0000	0000 ~198
先頭クラスタ番号 (low)	130A	4091 ~201
クラスタ内セクタ位置	0000	003A ~197
セクタ内バイト位置	0000	7A05 ~196
ファイルサイズ	7FFF	5EA7 ~202

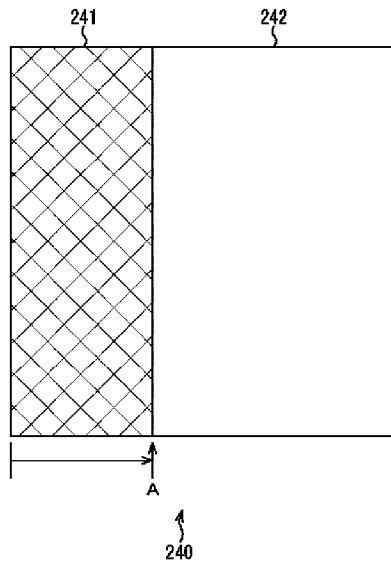
[Drawing 14]

図14



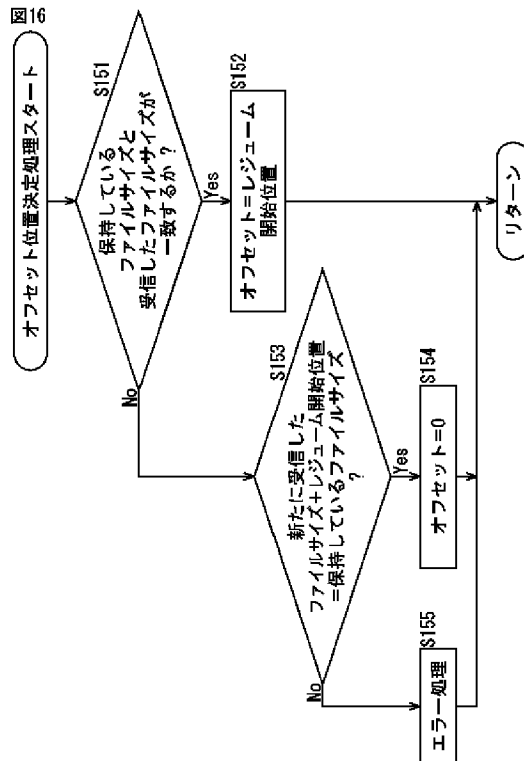
[Drawing 15]

図15



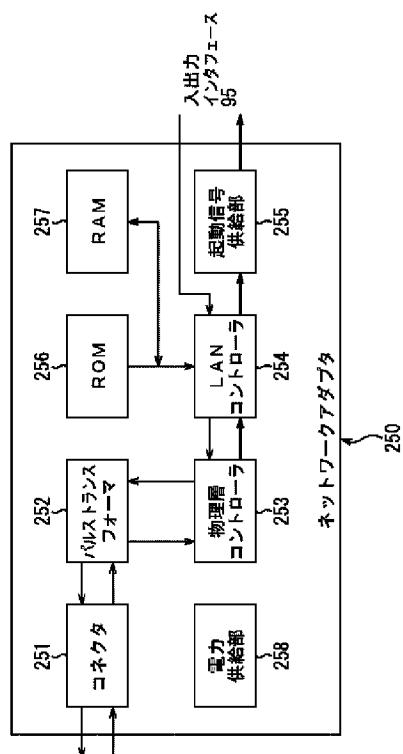
[Drawing 16]

図16



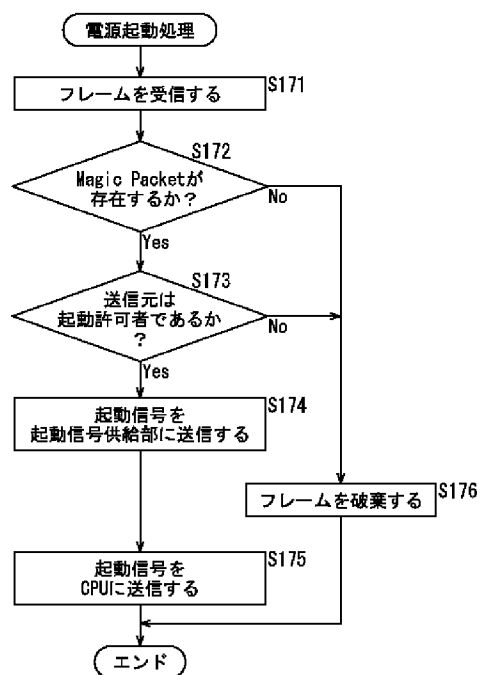
[Drawing 17]

図17



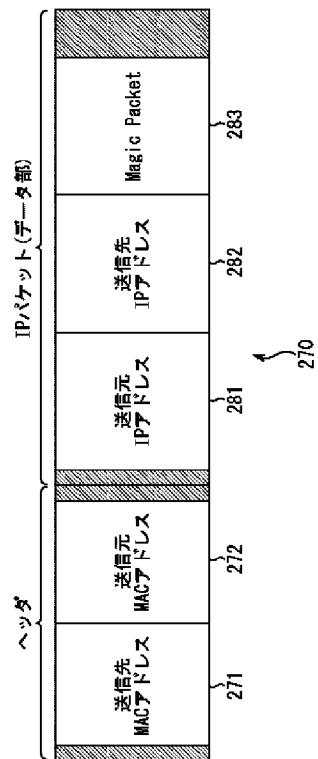
[Drawing 18]

図18



[Drawing 19]

図19



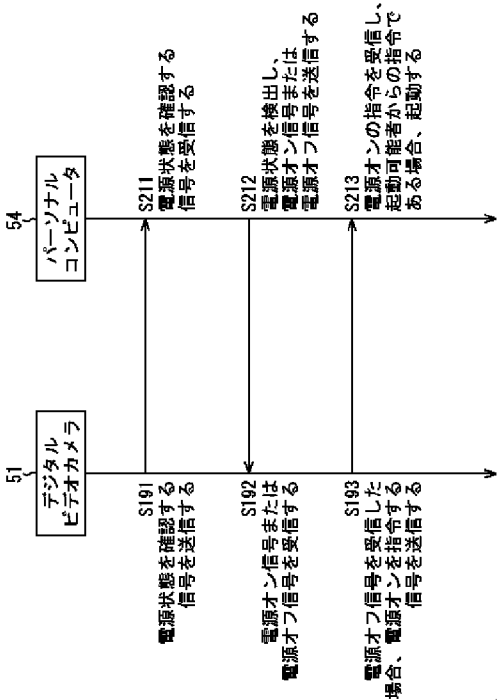
[Drawing 20]

図20

FF	FF	FF	FF	FF	FF	FF	FF	01	02	03	04	05	06	01	02	03	04
05	06	01	02	03	04	05	06	01	02	03	04	05	06	01	02	03	04
03	04	05	06	01	02	03	04	05	06	01	02	03	04	05	06	01	02
01	02	03	04	05	06	01	02	03	04	05	06	01	02	03	04	05	06
05	06	01	02	03	04	05	06	01	02	03	04	05	06	01	02	03	04
03	04	05	06	01	02	03	04	05	06	01	02	03	04	05	06	01	02
01	02	03	04	05	06	01	02	03	04	05	06	01	02	03	04	05	06
77	88	99	AA	BB	CC	発信者(の機器)のMACアドレス											

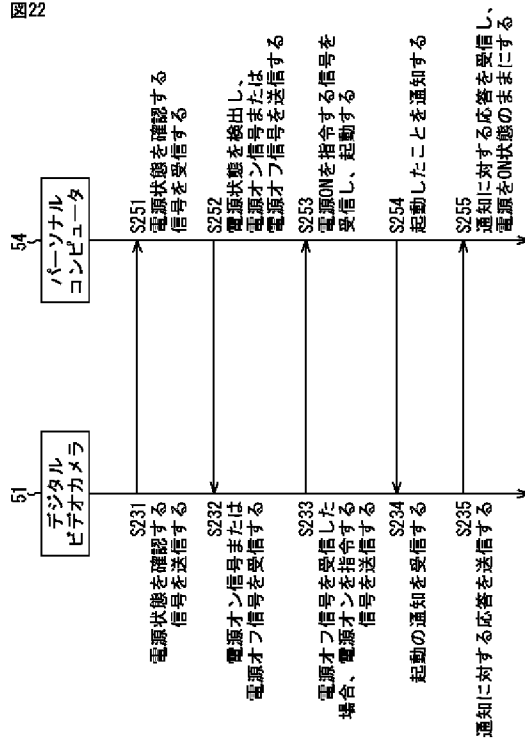
[Drawing 21]

図21



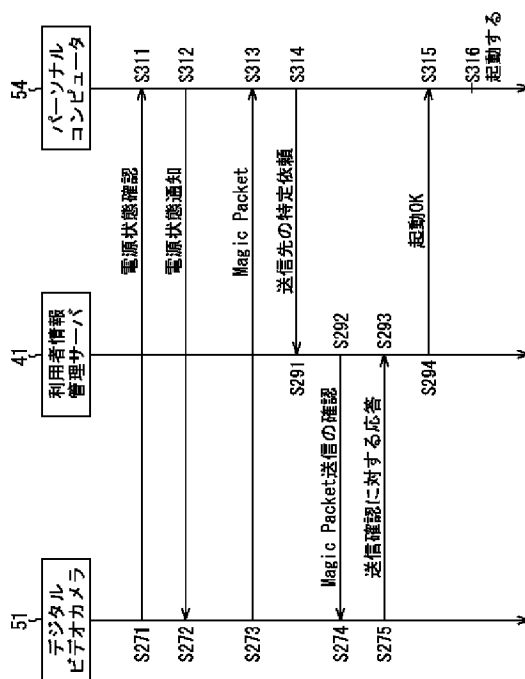
[Drawing 22]

図22



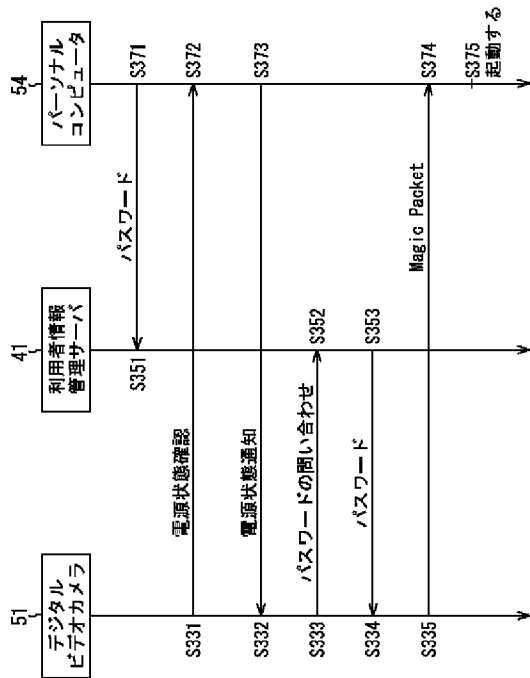
[Drawing 23]

図23



[Drawing 24]

図24



[Drawing 25]

図25

FF	FF	FF	FF	FF	FF	FF	01	02	03	04	05	06	01	02	03	04
05	06	01	02	03	04	05	06	01	02	03	04	05	06	01	02	03
03	04	05	06	01	02	03	04	05	06	01	02	03	04	05	06	01
01	02	03	04	05	06	01	02	03	04	05	06	01	02	03	04	05
05	06	01	02	03	04	05	06	01	02	03	04	05	06	01	02	03
03	04	05	06	01	02	03	04	05	06	01	02	03	04	05	06	01
01	02	03	04	05	06	01	02	03	04	05	06	01	02	03	04	05
FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
01	02	03	04	05	06	01	02	03	04	05	06	01	02	03	04	05
05	06	01	02	03	04	05	06	01	02	03	04	05	06	01	02	03
03	04	05	06	01	02	03	04	05	06	01	02	03	04	05	06	01
01	02	03	04	05	06	01	02	03	04	05	06	01	02	03	04	05

バスワード

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